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ABSTRACT

The object of this study was to predict ego functioning in college among a group of successful high school graduates. Two hundred and seventy-one graduates of Phillips Exeter Academy who had been admitted to Harvard University during 4 consecutive years were studied. Three types of previously collected data were used: (1) teacher reports on the students, (2) family background information, and (3) Harvard data, including field of concentration and changes, academic performance, extracurricular activities, dropout information, disciplinary actions, and visits to the psychiatrist. This information was coded and analyzed. Analyses of variance showed that the Exeter teachers described differently students who succeeded academically, who dropped out, and who became psychiatric diagnostic groups. The teachers' reports also predicted academic performance almost as well as the combination of secondary school grades and scholastic aptitude tests. They predicted emotional problems and dropping out of college better than all the background variables combined. (AF)

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THE PREDICTION OF EGO FUNCTIONING IN ADOLESCENCE

Irvin Taube
Rebecca Vreeland

Phillips Exeter Academy
Exeter, New Hampshire

June, 1970

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
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SUMMARY

This research, part of a larger study of adolescent development sponsored by the Phillips Exeter Academy and HEW, predicts ego functioning among college students from data readily available in secondary schools.

The files of 271 Exeter students who attended Harvard University over a recent four year period, representing a group of competent adolescents faced with the transition from high school to college, provided the data for this study. The major question of the research was whether the secondary school teachers acting as participant observers could record the complex communication a student presents in the classroom or dormitory so that their routine reports could be used to delineate the future ego functioning of the students as measured by academic performance, dropping out, being disciplined, and being treated for a psychological problem in college.

From a content analysis of the Exeter teachers' reports, 64 different categories of comments about the students were derived, each of which formed a continuum on which a student was rated. A factor analysis of these categories revealed six major types of students as perceived by the teachers such as the "jock", the "friendly Joe" and the "competent grind" which are suggestive of well known characterological types, styles of interpersonal relationships, and patterns of cognitive functioning.

Analyses of variance show clearly that the Exeter teachers describe differently students who succeed academically, who drop out, and who become psychiatric patients in college. They even differentiate among future psychiatric diagnostic groups.

For example, those who drop out of college and those who become psychiatric patients are considered by their Exeter teachers to be more brilliant but more erratic than their peers. Neither group was liked by their teachers nor was respected by the other students. The group who became psychiatric patients were described as depressed and insecure while the college drop outs were described as angry young men at Exeter.

However, the four measures of ego functioning delineate large but necessarily heterogeneous populations and represent the final common pathway for a variety of problems. Therefore, we further divided these groups based on the presence or absence of other signs of disturbed ego functioning which, we believe, led to a better understanding of underlying conflict in these students. Composite dependent variables based on these combinations of our measures of ego functioning are more clearly predictabl. entities and allowed us to define more subtle aspects of behavior.

They are summarized below:

1) the well rounded successes (normals): These students defined the mean of all the virtues at Exeter and displayed a conspicuous absence of any sign of future difficulty. At Harvard they achieved more than what was expected of them in all areas.

2) the unsure (seen for help only): These students who were able but unsure of themselves were in other ways like the normals in the sample. They became patients in college but did not otherwise express emotional conflict.

3) the brittly brilliant (seen for help and dropped out): These students who were overly conscientious and brilliant but unsure of themselves deviated from the masculine ideal at Exeter. They became patients in college and their conflicts interfered with their college careers so much that they had to drop out.

4) the rebels (seen for help and disciplined): These students who were brilliant but rebellious and had a firm masculine identity at Exeter became patients as a result of their rebelliousness in college. Their revolt, however, did not seriously interfere with their academic success.

5) the chronic underachievers (seen for help, dropped out and unsatisfactory record): These students who were underachieving, insecure and deviant from the Exeter ego ideal in all ways failed in college, became patients, and eventually dropped out.

6) the alienated (dropped out only): The students who performed well at Exeter but would not conform were heartily disliked. At Harvard they left almost as soon as they arrived and almost nothing is known about their subsequent history.

7) the unable (unsatisfactory record and dropped out): These students showed signs of limited ability and had self doubt and difficulty in dealing with frustration. The intellectual demands of the college overwhelmed them and they dropped out. However, most of them returned and graduated.

8) the ordinary (unsatisfactory record only): These students of somewhat limited ability overextended themselves academically in college and failed, but reorganized with a new and easier program and graduated without other signs of disturbed ego functioning.

9) the overachievers (disciplined only): These students overcompensated for their limited ability by aggressiveness and hard work. They acted out their frustration when their efforts did not bring the expected success in college.

Multivariant analyses were also performed to see if the teachers' reports differentiated the students with future problems better than conventional background variables such as family history, intellectual aptitude and secondary school performance. The teachers' reports predicted academic performed nearly as well as the combination of secondary school grades and scholastic aptitude. More importantly, these reports predicted emotional problems and dropping out of college better than all of the background variables combined.

Our data suggest the conclusion that normal adolescent development occurs within limits which the Exeter teachers do not consider to be tumultous. If the normal students in this study are undergoing psychic turmoil during their mid-adolescence, it is internal, private and within expectable limits of ego functioning and object relationships in a school setting. It would appear that investigators in focusing on psychopathology have generalized from patients to normal development and have presented a special version of human development. The changes occurring in normal development are not suggestive of symptom formation or maladaptive character development.

The Exeter teacher comments reflect enduring characterological qualities in an ostensibly symptom free population. It appears that character formation is already well established, whether it is adaptive or maladaptive by mid-adolescence. At that time, one can predict the direction of future development by knowing the nature of the character structure. The students with the maladaptive character formation become symptomatic in college when their psychic apparatus is no longer able to cope with the new demands placed upon it. The composite variables in this study describe symptom complexes of a failing psychic apparatus.

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The literature of adolescent psychology is replete with case reports, studies of patient populations, and literary anecdotes. However, few systematic attempts have been made to study normal adolescent development (Westley, 1958; Grinker, 1962; Kagan, 1964; Offer, 1965). The view of adolescent development most widely held today is that revealed in the psychoanalytic literature (Anna Freud, 1958; Blos, 1962; Erikson, 1956) which suggests that adolescence, a normative crisis in Erikson's terms, is a period of normal growth and consequently normal turmoil out of which comes, like the Phoenix from the ashes, a healthy adult. It has even been suggested by Anna Freud that the lack of such a crisis might indicate a failure in normal development. This point of view has gained such currency that it has given rise to a diagnostic category--the adjustment reaction to adolescence. Into this category have been deposited many of the difficult and uncertain diagnostic and prognostic problems in the practice of adolescent psychiatry. "In adolescence it has been unusually difficult to distinguish health from illness or normal turmoil from pathological process." (Offer, 1963) If everyone is in turmoil, it becomes a moot question who is ill and who is well. This problem has generally been resolved by an overly sanguine view of adolescence as a phase which the adolescent eventually outgrows.

More recent evidence puts this generally accepted point of view into question (Masterson, 1963; Offer, 1965). For example, in a series of reports by Masterson (1966, 1967, 1969) on a recently completed longitudinal study of adolescent patients and controls, the claim was made that "relatively healthy adolescents, although they may be in turmoil, did not show symptoms that simulate a psychiatric illness and differed quite distinguishably from those with a psychiatric illness." Several authors have called for predictive studies of adolescent development which would as Blos has said, "help us to understand and evaluate the non-pathological aspects of this stage in development during which the personality normally shows many apparently pathognomic features" (Blos, 1962).

The conceptual scheme which gave direction to our research design was based on Helena Deutsch's hypothesis that "there is an inherent drive of the ego toward growth and independence in each of the significant transitions in the course of psychosexual development" (Deutsch, 1944). Rochlin, in discussing Helena Deutsch's hypothesis about such transitions, made the following comment: "There is present in each transition a regular hazard: instead of a thrust of activity, aggression may occur. The distinction to be made between them is that a thrust of activity represents a development in the ego which utilizes the aggressive drives toward mastery and adaptation to reality; whereas the thrust of aggression indicates some fault in ego functions which do not turn aggression to such constructive purposes. With aggression instead of activity, direct instinctual gratification is sought; consequently, regressive aims are promoted, an increase in narcissism is to be found at the center of adolescent conflicts. In the phase that occurred during adolescence we observed two constant

elements: an intensification of aggression instead of activity; and increased narcissism" (Rochlin, 1965). This conceptual scheme led us to focus on performance and failure in performance as a way of testing a thrust of activity and its misdirection.

We can test the development of ego functioning in adolescence by selecting an age-specific, culturally determined life task and reviewing the ways various adolescents deal with it. In this way we will arrive at a definition of normal adaptive functioning and variations from it. Therefore, we chose to differentiate the life histories of a group of students who should have been able to work through the transition from high school to college--the high school successes. Theoretically, this seemed like a particularly well-suited model to study adolescent development since separation and individuation are such important tasks at this time of life. To accomplish successfully the transition from high school to college, an adolescent must not only separate from the dependent relationship with his family or in this instance his family surrogate, the school, but he must also establish new and independent patterns of functioning and relating. The transition to college has been utilized in previous studies of adolescence, e.g., by Silber (1961) and Coelho (1963) who described the effective adaptation in college of a group of "competent" high school volunteers.

The longitudinal model we used was also suggested by the growing evidence for the continuity of ego functioning over time and the view that adolescence is but one point in a lifetime of adjustments.* If these recent studies are correct one should be able to predict the performance of young adults by knowing the nature of their character structure in mid adolescence, whether adaptive or maladaptive.

The purpose of this interdisciplinary research beyond a delineation of the natural history of the adolescence of these students, was to develop predictors of their ego functioning in college from their behavior and performance in high school, and to study the student-teacher relationship in secondary school as revealed in the comments of teachers about their students. This research utilized only routinely available observational data; that is, records of behavior both as predictors and definitions of college and high school performance and

* For example, Symonds (1961) reported the continuity of fantasy content from adolescence into adulthood. In a 1-year follow-up study of Yeh (1965) high school students in college showed that levels of mental health did not change from one environment to another. Kroeber (1963) was able to make reliable predictions from interviews in adolescence to later life adjustment.

emotional adjustment. This method seemed particularly suitable for the study of adolescent boys because of the tendency to action in this period, and the expression of conflict in action; and also because of the uniformity of certain standards of behavior, accomplishment, and expectations in this period. The data from the files of a school provide ready criteria to test the success or failure in meeting these expectations. Although collected from a single secondary school, the data used in this study should be readily available at most secondary schools.

Method

A. The Sample

Since the object of the present study was to predict ego functioning in college among a group of successful secondary school graduates, we chose to study all of the students at the Phillips Exeter Academy who were admitted to Harvard in four consecutive years. This group of 271 students represented the "best" of the Exeter class in terms of performance and was so regarded at Exeter. We avoided the problem of selecting in advance a normal or modal (Offer, 1963) adolescent population because we felt that by looking at only one criterion of success, that is the successful transition from high school to college, we had already preselected our population on the most clear-cut and objective basis we could.

Because we chose only students who were admitted to Harvard, we automatically excluded any Exeter students who showed evidence of being disturbed or who failed academically during secondary school. We felt, however, that it was important to exclude this group from our study since we were trying to predict future ego failure among seemingly successful students. It was not our purpose and would have added nothing to our understanding of adolescence to predict future ego failure among students already manifesting ego dysfunction.

The sample was drawn from four consecutive years when world conditions did not interfere with the natural history of a student at college. These years were sufficiently in the past so that 90% of the students should have graduated even though they had taken time out of their college careers (Nicholi, 1968). Since these four years corresponded with the sample selection of the Harvard Student Study, the vast amount of data already gathered on these same students could be used in this study. This sample is characteristic of other groups at Harvard in terms of performance and failure (Farnsworth, 1966) and of groups at other schools (Pervin, 1966). Our sample, then, consisted of a large group of competent adolescents about whom a great deal of data had been gathered during their careers in boarding school and college. The sample covered ages 16-22 at a minimum and 14-25 at a maximum, giving us an unusually long follow-up from early adolescence to young adulthood.

B. Type of Data Collected

Three types of previously recorded data were collected for this study--teachers' reports and background data for use in predicting ego functioning in college and Harvard data to measure various types of ego functioning among these students in college.

1. Teacher reports on the students

The results of a pilot study done by the senior author indicated that a clinical interview might be the best predictor of future ego functioning. Few students were evaluated by the psychiatric staff at Exeter. However, all students were assessed at the end of each academic year by every advisor and teacher they had encountered in the classroom or dormitory. These summaries were written for a confidential file to be used for guidance and administrative purposes and were not intended for use in writing recommendations. Consequently, they are frank, informal, and impressionistic. They present an unstructured response of the teacher to his experience with a student. Although these reports were not written by experienced clinicians, a psychiatric evaluation of these reports indicated that teachers were responding to subtle clues in the behavior of their students and were differentiating between students on a number of important bases. In fact, these reports are of greater value to this research than psychiatric evaluations because they are not biased by preconceptions of normality and pathology.

2. Background data

We collected data on family socioeconomic status, incidence of death or divorce, and number and order of siblings. We also recorded the students' medical history, psychiatric history, and IQ; from his Exeter career we recorded his grades, financial aid, courses taken, incidence of psychiatric or medical care, discipline and punishment, the Exeter personality stability rating, and SAT and MAT scores.

3. Harvard data

Helen Deutsch's view of adolescent development influenced our research design in a number of ways leading us to focus on different types of performance in college as a way of testing the presence of a thrust of activity and its misdirection. We collected data on the student's field of concentration and any changes in field during the undergraduate years, academic performance, and extra-curricular activities. We recorded which of our students dropped out of school or took leaves of absence and the amount of time they were gone and the reasons for their departure as recorded in the files of the administrative board. We also recorded any instances of disciplinary action from those same files. Finally, we recorded a student's visits to the psychiatric staff of the university health services or the Bureau of Study Counsel, his chief complaint, the diagnosis made of his problem by the staff, and the disposition and treatment of the case.

To obtain the data used in the present study, we required the cooperation of both Exeter Academy and Harvard University. This

cooperation made it possible for our data from the records to be unusually complete, accurate, and comprehensive. To insure confidentiality in the administrative records, the authors did not peruse these records directly, but were read the necessary data for the study from the records by a member of the administrative staff. Each student received a code number and all analyses of the data were done using these code numbers. The original name and number list was destroyed to insure that no one could ever trace the data to individual students.

The coding and analysis of each of the three types of data collected on these Exeter-Harvard students will be discussed below.

C. Coding and Preliminary Analysis of Teachers' Reports and Background Data

1. The teachers' reports

All of the teachers' cumulative reports about the students in our sample were content analysed using an empirically derived code whose categories were as simple and close to the actual reports as possible.

Every phrase of each teacher's report was coded according to a series of continua which provided information on both the content of the teacher's comments and his negative or positive evaluation of the student. For example, the phrase "student is very brilliant" was coded on the continuum "intelligent-dull" and was given a "1" for the most positive evaluation level. The phrase "generous" was coded on the "generous-stingy" continuum and given a "2" for evaluation level. In general, the highest evaluation levels were given to expressions having adverbial modifiers such as "very brilliant" or "extremely generous" while the second evaluation level was given to the same terms unmodified. All of the content categories and examples of each evaluation level within categories is given in Appendix A of this report. The records of a number of students not in the study were coded as a pretest. From these pretest data the code was revised extensively several times. The final version contained 130 content categories and 6 evaluation levels. (1 = very high on category, 2 = high, 3 = low on category, 4 = getting better, 5 = getting lower, 6 = moderate. Since so few of the teachers used levels 3 and 5, they were dropped in the final analysis of the data, and the data recoded to form a Likert scale from 3 for extremely high to 1 for low.)

The coding was checked by the authors, yielding 91% agreement between the authors and the coder on the categorization of content and 94% agreement on the categorization of evaluation level. The 130 categories were reduced to 64 categories actually used in the study since 66 categories were used so infrequently by the teachers that it was necessary to combine them with categories more frequently used which were very similar in content.

A study which uses written evaluations of subjects to describe them faces several problems which must be considered before the data from the written reports can be used as fair approximations of descriptions. To see whether the teachers' comments could be used fruitfully in the present study, we performed several preliminary analyses described below.

The most important problem in a study which uses evaluations of subjects is the tendency of some evaluators to make very favorable remarks about all of the people they are evaluating. Such unbalanced descriptions are not only hopelessly uninformative about a single individual, but also render comparisons among individuals impossible since all the subjects are rated high on all categories. Certain precautions were taken against overly positive descriptions when the code for the teachers' reports was designed. For example, more levels at the positive end of a content category were differentiated than at the negative end. On the "intelligent-dull" content category, the highest evaluation level was given only to statements of "very brilliant", whereas "dull and slow" were both given the negative evaluation, since almost none of the teachers actually said a student was "stupid". Despite this procedure, the distribution of evaluation levels is slightly skewed toward the more positive levels, but there is adequate spread in the use of evaluation level to permit further analysis of the data. The highest evaluation level was used on the average 19% of the time, the high evaluation level 48%, medium evaluation 13%, low evaluation 14%, "getting better" evaluation 5%, and "getting worse" evaluation 1% of the time.

Although the teachers as a group were discriminating in their use of positive evaluations, it was still possible that some teachers were praising everyone. Such a teacher could grossly exaggerate the ratings of each student he evaluated. When each teacher's distribution of evaluation levels was checked, only 8 teachers who evaluated more than 10 students were statistically significantly different from the whole group of 119 teachers on any of the evaluation levels. Of these 8 teachers, 4 spread their remarks over many more evaluation levels than the teachers as a group, and the other 4 were neither consistently more positive nor more negative than the other teachers. From these results we were confident that the study would not be contaminated by overly positive teachers' evaluations.

From past experience with data from evaluations, we were concerned that the descriptions might center on a few content categories, mostly ones describing classroom performance (see Vreeland, 1960; Stafford, 1958). This distribution was not characteristic of the data in the current study, however. No content category was used by every teacher. Thirty-six different categories were used by half the teachers, while 50 different categories were used by a third of the teachers. In addition, practically no content categories were used by many teachers on a few students or by a few teachers on many students. The correlation between the categories ranked by number of different teachers using

Table 1. Categories Most Frequently Used by Exeter Teachers

	Rank by Mean Usage	Rank by Number of Teachers Using	Number of Teachers Using
Brilliant--limited	1	2.5	114
Likeable--unpleasant, objectionable	2	2.5	114
Conscientious in studies--poor attitude	3	1	115
Intellectual curiosity--indifferent	4	4	112
Friendly--withdrawn, introvert	5	5	111
Good grades--poor grades	6	10.5	97
Mature--immature	7	6	104
Good in verbal studies--not good	8	27.5	81
Predict academic success--predict academic failure	9	14.5	93
Good character--bad character	10	8.5	99
Talks in class--doesn't contribute	11	20.5	87
Overachieves--not working to potential	12	8.5	99
Hardworking--lazy	13	10.5	97
Popular--no friends	14	7	101
Enthusiast, energetic--slow moving, not enthusiast	15	22	85
Well organized--careless, inaccurate	16	25.5	82
Responsible--unreliable	17	13	95
Good in science--not good	18	46	63
Sense of humor, fun--humorless	19	23.5	83
Good academically--poor	20	12	96
Talks too much--inarticulate	21	18.5	88
Well mannered--gross, poor manners	22	17	89
Steady worker--uneven	23	18.5	88
Purposeful--lack of direction	24	14.5	93
Happy--unhappy	25	16	90

them and the categories ranked by the number of different students on whom they were used is .76, significant at the .01 level. The teachers very seldom repeated themselves in a report about a student. Each content category was coded as many times as it was used, and this multiple coding occurs very infrequently.

As might be expected, the categories most frequently used by these teachers described the Exeter man in his role as a student, referring to his intellectual capacity and his behavior in the classroom. The teachers used such categories as "brilliant-dull", "intellectual curiosity-uninterested", "good grades-poor grades", "clear thinker-confused" more often than they used any other categories. Also among the most popular categories were the teachers' evaluation of the students in terms of what sociologists call the "middle-class syndrome". Such categories as "hardworking-lazy", "responsible-irresponsible", "well mannered-crude", and "purposeful-lacks direction" were among the top 25. Another outstanding trait of a student's personality to the Exeter teachers was his ability to get along with people. "Friendly-unfriendly" and "popular-unpopular" ranked 5th and 14th in the most used categories, while "warm", "cooperative", "likes peers" and their opposites ranked farther down the list.

The Exeter teachers described personality traits of a student, although not as frequently as they mentioned his manners and how he related to people. They described a student as happy or sad, ambitious or easy-going, overconfident or self-deprecating, interested or uninterested in various subjects, and imaginative or unimaginative in the 50 most often used categories.

Two other single categories were used very often by the teachers: "likeable-unlikeable" and "mature-immature". These are catch-all phrases. The first, we suspect, functioned as the general positive reaction to the student; the second measured the student's progress toward the major goals of the school. The content categories used most frequently by the teachers are shown in Table 1.

It is clear from the preliminary analysis of the teachers' reports that the teachers were distinguishing among the boys in their classes and evaluating them differently. Before we could proceed with the major analysis of this study, however, we had to further combine the categories to produce a workable number of variables on which to compare the Exeter students.

To reduce the number of categories coded from the teachers' reports, we employed principal component analysis, a factor analytic technique used in the analysis of the Harvard Student Study data (see Bidwell and Vreeland, 1969; Vreeland and Bidwell, 1970). First we scored every student on each of the 64 categories using the mean score given to him by all of his teachers at Exeter. If no teacher described him in terms of a category under consideration, his score was left blank and he was omitted from the analysis of that category.

Table 1. (Continued)

	Rank by Mean Usage	Rank by Number of Teachers Using	Number of Teachers Using
Sensitive--insensitive, self-centered	26	27.5	81
Easy going--high strung, tense	27	23.5	83
Creative--unimaginative, pedantic	28	45	64
Cooperative--uncooperative	29	36	70
Ambitious--unambitious	30	20.5	87
Clear thinking--confused thinking	31	29	80
Poised, dignified--childish	32	31	78
Self-sufficient--dependent	33	30	79
Self-deprecating--grandiose	34	25.5	82
Interested in science--not interested	35	48.5	59
Aggressive--passive, lacks courage	36	32	76
Neat--sloppy, dirty	37	47	60
Solid, stable--flighty, erratic	38	43.5	65
Interested in verbal studies--not interested	39	41	66
Well-read, not well-read	40	43.5	65
Respected--teased, criticized	41	33	74
Wants to succeed--doesn't want to succeed	42	34	71
Extra-curricular accomplishment--none	43	41	66
Likes peers--doesn't like peers	44	50	48
Fast learner--slow learner	45	36	70
Imaginative, unconventional--colorless, uninteresting	46	41	65
Strong--frail	47	36	70
Modest--show off	48	38	69
Warm--cold, uncommunicative	49	48.5	59
Good behavior--bad behavior	50	39	68

The scores of all the boys on each category were then factored and the scores rotated by the varimax criterion. From the original factor analysis, 6 clear factors emerged. Each of the factors was then used as a group of variables which was refactored to purify the index. Each category that did not load more than .350 was discarded or placed in a different group of variables and each group of variables was factored separately again. The final analysis yielded 7 factors, with loadings of more than .350 for almost every category. Each factor explained a greater proportion of the variance than any of the individual categories. Several categories were empirically independent of any of the factors. They were treated as individual variables in the analysis of the data.

The type of man characterized by each of the factors and the single categories retained in the analysis are listed below. The loadings of each category on the various factors are shown in Table 2. The single categories retained in the analysis are listed at the bottom of Table 2.

1. The "competent grind" factor. The Exeter man who scored high on this factor was the joy of the teachers. While they didn't consider him brilliant or creative, they lauded him as a "superior" student. These "superior" students were neat and well-organized. They were considered mature, industrious, dependable, and honorable. They were also conscientious overachievers. They took themselves very seriously according to their teachers and were considered the most mature of all the types of students.

2. The "brilliant" factor. Students scoring high on this factor had a high level of academic accomplishment. They were predicted to be successful in later life and were considered brilliant and creative, especially in verbal rather than scientific subjects. They were thought to have a lot of intellectual curiosity and interest, again especially in verbal studies. They were considered fast learners and well read. It is interesting to note, however, that these very intellectually able students were considered neither superior nor likeable by the teachers.

3. The "likeable" factor. These students were well mannered conformists whose behavior was always considered excellent and mature. (Note that they weren't considered mature as much as their behavior was mature.) The likeable student was described as liking adults and responding well to teasing. He was well mannered, modest, and candid, not evasive. He was not aggressive and was liked best by the teachers who also felt he was well brought up.

4. The "active" factor. Students scoring high on this factor were described as active, outgoing, hostile teenagers. They contributed in class but generally talked too much. They were not solid, steady, patient, controlled, or modest. They were also described as aware, not vague.

Table 2. Factors and Categories from Teachers' Reports with Loadings of Original Teachers' Categories

I.	**Grind Factor**		**II.**	**Brilliant Factor**	
	Superior	.470		Academic accomplishment	.751
	Well organized	.554		Good in science	.513
	Overachieve	.600		Success predicted	.758
	Conscientious	.767		Intellectual interest	.562
	Mature	.454		Brilliant	.788
	Industrious	.668		Good in humanities	.674
	Takes self seriously	.574		Fast learner	.534
	Dependable	.592		Well read	.437
	Ambitious	.592			
	Honorable	.496			
III.	**Likeable Factor**		**IV.**	**Active Factor**	
	Good behavior	.514		Aware	.286
	Likes adults	.466		Active	.516
	Generous	.468		Outgoing	.511
	Conformist	.582		Hostile	.302
	Response to teasing good	.499		Talks too much	.664
	Well mannered	.537		Steady worker	-.475
	Behavior mature	.518		Contributes in class	.643
	Candid	.477		Solid, steady	-.421
	Likeable	.686		Patient, controlled	-.472
	Happily brought up	.388		Meek, modest	-.568
V.	**Popular Factor**		**VI.**	**Masculine Factor**	
	Respected	.524		Extra-curricular interest	.358
	Popular	.743		Athletic accomplishment	.378
	Easy going	.657		Loyal	.590
	Naive	-.195		Firm Identity	.537
	Sense of humor	.466		Masculine	.530
	Strong	.368		Happy	.576
	Dominated by parents	-.268		Realist	.388

VII. **Leader**

VIII. **Intellectual interests (verbal and scientific)**

IX. **Teacher expressed concern about student**

X. **Imaginative, weird**

XI. **Overconfident**

XII. **Clear thinking**

5. The "popular" factor. These students were not necessarily liked by the teachers but were very popular with their peers. They were considered to be easy going and respected by the other students. They were also characterized as strong, healthy adolescents with a good sense of humor. The teachers also noted that they were not naive and not dominated by their parents.

6. The "masculine" factor. These men were interested and accomplished in extra-curricular activities, especially athletics. They were very realistic, masculine, all-American boys and were considered to have the firmest identity of all the students. The teachers also described them as loyal to the school and their families.

The following categories did not fit into any of the factors and are considered separately in the analysis.

1. Leader. The men who were high on this category were considered by their teachers to be student leaders or men possessed of leadership qualities.

2. Intellectual interests. Whereas the level of performance of the Exeter men in science and the humanities was part of the brilliant factor, their level of interest in the two groups of subjects was an independent phenomenon. We shall consider verbal studies and scientific interest separately.

3. Teacher concern. Occasionally the teachers expressed a concern (or evidence of no concern) about a boy, how he was doing at Exeter and how well he would do in the future.

4. Imaginative. Although a number of facets of a boy's intellectual ability were correlated with each other and combined into the brilliant factor, this category is independent of the others in that factor. The "imaginative" category describes an offbeat style in a boy's academic work and relationships with others.

5. "Overconfident". The description of a boy as grandiose and overconfident with an extremely high self evaluation was also independent of any of the factors in the study.

6. Clear thinking. Although this category seems close in content to "well-organized" or "fast learner" it is, in fact, independent of other measures of intellectual style. The opposite end of the continuum, "confused thinking", was actually used slightly more often by the teachers and appears to characterize boys who had some emotional problem that affected their work.

The principal component analysis not only provides a convenient and empirically meaningful way to reduce the number of independent variables in the study, it also illustrates the fruitfulness of the teachers' reports as descriptions. The teachers were evidently not

making random comments about the students, but instead were drawing a clear and readily understandable picture of several types of Exeter men. We will see later in this report that the teachers not only differentiated types of Exeter men, but that this differentiation is fruitful in predicting their future careers at Harvard.

2. The Background Variables

In this study it is essential to have a good knowledge of the background of the students both in terms of their family life and their careers at Exeter. First, it is important to know how the teachers' descriptions of the sample were affected by the students' background. We want to know if the teachers, in evaluating students, were merely responding to background and demographic characteristics or were they remarking upon facets of a student's personality and behavior that are not readily predicted from information about his family. Second, we must ascertain whether the teachers' descriptions are better predictors of ego functioning in college than the standard family and secondary school performance parameters that have been heretofore used in studies of college performance.

Before we analyze the relationship of background to teachers' comments and the relative power of both in predicting ego functioning in college, we should become more familiar with the several background variables used in this study and their interrelationships. We included in this study only background variables that have been described in other studies as important predictors of one or another aspect of ego functioning in college. We were fortunate that the Exeter Academy records were complete enough to allow us to collect data on almost all of the predictors that are mentioned in other studies such as family disruption, number and order of siblings, previous medical and psychiatric history, socioeconomic status, region of origin, and secondary school performance and behavior.

The variables which describe the family characteristics of our sample are listed in Table 3 with the frequency of occurrence of each of the categories into which we coded the variable. A few variables (adoption, presence of step siblings, mental retardation) on which we gathered data are not included in this table because the frequency of their occurrence is so low that they could not be used in the study. In addition, death and divorce were grouped together in a family disruption index in the analysis.

In general, the family backgrounds of these students showed nothing unusual. Very few of the sample had experienced any sort of family disruption; and, before they attended Exeter, practically none of the students had experienced any emotional problems severe enough to require professional help. The only exception to this benign picture of family life was the number of men who underwent surgery of some sort in their childhood. Almost 23% underwent surgery other than tonsillectomies. That 46% of the sample had tonsillectomies, however, is no surprise

Table 3. Frequency Distributions of Family Characteristics

Divorce	No	Yes	
	93.8%	6.2%	
Death in Family	No	Yes	
	91.9%	8.1%	
Previous Medical History	Nothing	29.0%	
	Tonsillectomy	45.8%	
	Long illness	2.3%	
	Surgery	22.9%	
Psychiatric care (previous to secondary school)	No	Yes	
	98.9%	1.1%	
Family home region	Boston	9.5%	
	New England	29.8	
	New York City	11.5	
	East	19.1	
	Other	29.9	
Father's college	None	5.4%	
	Harvard	33.2	
	Ivy League	18.1	
	Other	43.3	
Father's Occupation	Upper Manager	17.6%	
	Lower Manager	6.5	
	Professional	34.0	
	Minor Professional	10.7	
	Deceased or Retired	15.8	
	Other	15.4	
Number of children	Mean	2.73	
Exeter Scholarship	No	Yes	
	79.3%	20.7%	

for this sample since that particular operation was almost considered a normal part of childhood at that time.

The socioeconomic and regional distribution of the Exeter men was quite diverse for an Eastern private school, reflecting the emphasis Exeter places on its national reputation and character. Half the men came from outside the New England area and almost a third from outside the entire Eastern half of the country. Although almost a third of the fathers of our sample attended Harvard, very few attended other Ivy League schools. However, almost half of the fathers attended some other college or university. Only 5% of the sample were first generation college men. The upper-middle class skew of the sample is further demonstrated in the occupation of the fathers. Over half of the fathers of our sample held either major professional or upper managerial positions while only 15% of them were ordinary white or blue collar workers. Although we have no information on the incidence of medical illness or family disruption for the Harvard population, the distribution of the sample by region and socioeconomic status is quite similar to the distribution for the college as a whole (Harvard Student Study Data).

The variables which describe the Exeter careers of the men in our sample are listed in Table 4 with their frequency distributions. Our sample were remarkably healthy while they were at Exeter although almost 15% of them saw a psychiatrist during their secondary school years. This increase in psychiatric help from the 1% who were treated by a psychiatrist prior to Exeter in part reflects the increasing strain of performing at the high level required by the Exeter staff and in part reflects the structure of the school in which the health service functions as a general counselling bureau. The Exeter medical staff upon admission to Exeter rated two thirds of our sample as very stable personalities and only two boys as having possible adjustment problems.

Although the number of activities that are classified as disciplinary offenses at a boarding school greatly exceed those that would be considered misdemeanors in the larger society, very few of our sample boys committed misdemeanors at Exeter. Those who did were mostly called down for disturbing the peace. These figures are not out of line with the number of disciplinary offenses committed by the Exeter population as a whole. 34% of the Exeter men find themselves on disciplinary restriction at some time during secondary school as compared with 29% of our sample.

The sample of Exeter men in our study is above average in both intellectual ability and academic performance at Exeter. Only 4.5% of our sample was ever on academic restriction or probation (as contrasted with the much higher figure for disciplinary restriction and probation). The Exeter grades run from 1-10, and as can be seen from Table 4, our sample received above average grades all four years, doing especially well senior year. The rise in grade average of our sample during their Exeter years can be attributed partly to learning the ropes (the same pattern of grades occurs among the men in the

Table 4. Frequency Distribution of Exeter Variables

Medical care at Exeter (major)	No	Yes			
	94.3%	5.7%			
Psychiatric care at Exeter	No	Yes			
	85.4%	14.6%			
Exeter personal stability rating	Excellent	Good	Average	Poor	
	65.6%	24.1%	6.9%	.4%	
Number of students committing crimes	Drinking	Smoking	Disturbing peace		
	1.9%	5.1%	10.8%		
	Off limits	Other			
	3.7%	1.1%			
Students receiving disciplinary action	Restriction	Probation			
	24%	5.9%			
Mean grade average	Freshmen	Sophomores	Juniors	Seniors	
(10 = highest possible grade)	6.4	6.2	6.7	7.2	
Grade average by subject	Math	English	Language	History	Science
	5.9	6.9	6.5	7.0	6.0
	Biology	Art			
	6.0	6.8			
IQ	101-118	119-124	125-128	129-152	
	24.0%	24.6%	25.2%	25.5%	
SAT score	595-638	639-680	681-712	713-800	
	24.7%	24.9%	25.2%	25.3%	
MAT score	492-627	628-680	681-726	727-800	
	25.1%	24.7%	25%	25.2%	
Harvard predicted rank list	1-3.1	3.2-3.9	4.0-4.3	4.4-6	
(highest score = 1)	23%	27.1%	26.2%	23.3%	

Harvard Student Study) and partly to the influx of very bright public school men who entered the Academy in their senior year for a year of college preparation.

It is also quite clear that our sample performed better in the humanities than in the sciences. Their lowest grades were in math, while the highest were in their history courses. The men in our study were not unusual in their better performance in the humanities. Most of the Exeter students perform better in the humanities which are considered by the Exeter staff to be easier courses where higher grades are given overall.

The Exeter men we studied not only performed better at Exeter than their fellow students, they were also extremely bright. One quarter of our sample had IQ's above 130 and almost one third of them had SAT and MAT scores above 700. The average SAT and MAT scores for our sample were 649 and 686 respectively as compared with average SAT and MAT scores of 631 and 689 for the entire Exeter population. The Harvard admissions office predicts a future Harvard grade average for all of its applicants based on past performance and aptitude testing. Half of our sample had a predicted rank list of less than four which means that the Harvard admissions office expected them to graduate with honors.

We designed this study to describe the future ego functioning of a highly successful group of secondary school graduates. Our sample is certainly academically successful while at the same time representative of both Exeter and Harvard students. Their backgrounds were quite stable and comparable in socioeconomic status both to the other Exeter men and the Harvard students. There was no evidence of an unusual amount of adolescent sickness or emotional disruption in this group. In fact, they differed from their Exeter classmates only in grade average and tested IQ and academic aptitude. In this respect they were more like their future Harvard classmates than their current Exeter ones (Nicholi, 1968).

In the analysis of the data, to be discussed below, the medical and psychiatric history prior to and during the Exeter years were combined in two variables--medical history previous to Harvard and psychiatric history previous to Harvard. Since the grade averages for the four Exeter years were similar, and since not all the sample had grades for all four years at Exeter, only the total Exeter grade average was used in the analysis. Two additional variables were created from the original data reported in Tables 3 and 4: dispersion of grades in the various academic subjects was calculated from the standard deviations of grades. Men highest on this variable were those whose grades were most uneven across the various subjects they studied. We created this variable because we hypothesized that while average academic performance among this very bright group of young men might not distinguish students who were later to have trouble in college, unevenness of performance might foreshadow future disturbance of ego

functioning. The birth order of the students was also calculated because this variable has been shown in other studies to be a good predictor of academic performance (MacArthur, 1956).

Before we can analyze the relationship of the background and Exeter variables to future performance in college, we must know something of their relationship with each other. Are we dealing with various independent facets of the history of these men previous to their college years at Harvard or are all these variables highly interdependent parts of a few background syndromes that can be readily delineated? To answer this question we intercorrelated all the background variables listed in Tables 3 and 4.* Before the intercorrelations were calculated, the categories of the variables were ordered to form indices. Most of the variables that are included in Tables 3 and 4 are naturally ordered such as SAT, IQ, MAT, grade average, number of siblings, amount of scholarship and Exeter stability rating. The other variables were ordered as follows: region: west to east; father's college: Harvard, other Ivy, good schools, universities, colleges, no college; family disruptions: number of occurrences; medical history: number of occurrences weighted from major surgery to tonsillectomy; psychiatric history: number of visits; Exeter discipline: number of incidents weighted by severity of crime according to the Exeter administration; grade dispersion: size of the standard deviation of grades received; father's occupation: upper managerial to blue collar workers; sibling order: youngest to oldest.

The matrix of intercorrelations of all the background and Exeter variables in Table 5 suggests that almost all of the variables are independent with certain obvious exceptions such as the correlations between scholarship and western region of origin. It is interesting to note, however, that both IQ and Exeter grades are highly correlated with MAT score (Math aptitude) while not at all correlated with SAT score (verbal aptitude). In addition, Exeter grade average is correlated with grade dispersion, suggesting that those students who perform very well overall at Exeter are also very uneven in their performance, doing very well in some subjects and poorly in others. In fact, they do well in science and math and much less well in the humanities.

* We did not include predicted rank list in the matrix because it is really a composite of SAT, MAT and Exeter grades. We also omitted Exeter academic discipline which is a result of grade average and therefore neither theoretically nor empirically independent of it.

These background data on the Exeter men are also notable for the independence of some background factors that have been reported as highly correlated in the sociological literature. Although there is a strong negative correlation between father's college and performance among the entire Harvard population (Harvard Student Study data) that correlation is absent when one considers Exeter performance. The sons of Harvard fathers perform just as well at Exeter as the sons of fathers who went to other colleges or who never attended college. This finding suggests that the negative relationship at Harvard is probably accounted for by Harvard sons who did not attend Exeter.

Because of the restricted range of socioeconomic status in this sample other well documented correlations such as that between number of siblings and academic performance (Deutsch, 1967) and between father's college and father's occupational level (Havemann and West) are not present in this study. In this upper middle class sample, the children from relatively larger families do just as well as their counterparts from smaller families. The fathers of Exeter men also do equally well in terms of occupational level no matter where they went to college. The restricted nature of the sample does not, however, change the well-documented correlation between birth order and academic performance (MacArthur, 1956). The first born and only children perform better at Exeter than men who are younger siblings as can be seen from Table 5. Finally, it is clear from Table 5 that previous psychiatric or medical history is equally distributed across various types of families. Neither is strongly related to family disruption, family socioeconomic status nor performance and behavior at Exeter.

These 16 background and Exeter career variables will be analyzed in terms of their relationship to the teachers' descriptions in the following section of this report and then later used to predict ego functioning in college in combination with the data from the teachers' reports.

D. Coding and Indexing of the Harvard Variables

The four principal measures of ego functioning in college used in the study were emotional problems, academic performance, dropout, and discipline. Two other college variables (field of concentration and extra-curricular activities) were recorded in order to broaden the description of the Harvard careers of the students, but they were not utilized as formal measures of ego functioning.

1. Emotional problems

An emotional problem is operationally defined as a visit to one or both of the two facilities that Harvard provides to assist those who acknowledge that they have a problem. The Bureau of Study Counsel, officially a facility providing academic counselling, often becomes a provider of psychological counseling and a source of referral for the University Health Services. Counseling at the Bureau of Study Counsel is well organized and supervised. The University Health Services is the

Table 5. Intercorrelations Among Background and Exeter Career Variables

	death divorce	medical history	psychiatric history	region	father's college	father's occupation	number siblings	scholarship
death divorce								
medical history	.003							
psychiatric history	.126	.050						
region	-.005	.016	-.166					
father's college	.030	.036	.030	-.106				
father's occupation	-.029	.108	.149	.026	.111			
number siblings	-.218	.038	-.016	.034	.122	.062		
scholarship	.076	.003	-.180	.229	-.332	-.235	.034	
Exeter misdemeanors	.197	-.005	.117	-.075	-.065	.014	-.031	-.092
Exeter grade average	-.050	-.126	-.066	.008	-.195	.048	-.087	.078
Exeter stability rating	.013	.070	.048	-.029	.030	-.004	-.096	-.099
Exeter grade dispersion	.050	-.034	.019	-.056	-.071	.002	-.101	.025
SAT	-.017	.147	.094	-.102	.045	.068	.048	.044
MAT	.010	.001	-.050	.011	-.078	.059	.009	.088
sibling order	-.021	.097	.087	-.051	-.064	.044	.057	-.014

Table 5. (Continued)

	Exeter misdemeanors	Exeter grade average	Exeter stability rating	Exeter grade dispersion	SAT	MAT	sibling order
death divorce							
medical history							
psychiatric history							
region							
father's college							
father's occupation							
number siblings							
scholarship							
Exeter misdemeanors							
Exeter grade average	-.012						
Exeter stability rating	.008	-.053					
Exeter grade dispersion	-.021	.379	-.034				
SAT	.075	.067	.044	-.003			
MAT	.013	.304	.030	-.059	.042		
sibling order	.049	-.215	.041	-.072	.068	.055	

official source of psychiatric service for students. In coding one of our cases "being seen for help", an emotional problem always took precedence over a study problem when a student was seen for both.

Table 6 shows the number of students seen by the various Harvard helping agencies. One third of the sample was seen for some kind of help and almost all of those were seen for psychological help. These findings are consistent with those previous reported by Nicholi on a similar Harvard population (Nicholi, 1968).

The small group of students who were seen only for academic problems were not included in the group of students "seen for help" because their problems were not considered by the staff of these agencies to be emotional in origin. However, students whose presenting complaint was a study problem, but who were considered to have emotional problems were included in the "seen for help" group.

A diagnosis was also made of each case based upon the clinical assessment of the senior author. The problems inherent in arriving at an adequate diagnosis of emotional problems in adolescence are too well known to need elaboration here. In a sense this study is involved with the task of making clearer behavioral statements about adolescents which might have diagnostic significance. Since only previously recorded data was used, the nature of the research design imposed severe limitations on the ability of the authors to make a diagnostic statement. The records available at the University Health Services and the Bureau of Study Counsel, essentially clinical notes and correspondence written by a variety of personnel--psychiatrists, social workers, psychologists and counsellors--differed widely in quality and quantity. Consequently, only a diagnostic guess was possible in many cases. However, two attempts were made to arrive at a diagnostic statement.

The first method involved the use of the classic diagnostic labels as described below.* A compromise was made between the variety of clinical data that was available and the necessity for grouping cases into reasonably large categories. The compromise resulted in five diagnostic groups: schizophrenic, schizoid, character disorder, sexual deviant, and neurotic.

A second attempt was made to sort the psychiatric cases according to a combination of the impression of severity of illness and degree of functional impairment. Four levels of illness and impairment were defined resulting in 16 possible groups. Sorting the cases into these groups was performed independently by both authors with 90% reliability. These new diagnostic groups and the original diagnostic groups were highly correlated indicating that we had sorted our cases on much the same basis

* The definition of each diagnostic label is identical to that in the Diagnostic and Statistical Manual, American Psychiatric Association, Washington, D.C., 1965.

Table 6. Number of Students Seen for Help by Various Harvard Agencies

	Not seen for help	UHS	BSC (psychiatric)	BSC (academic problem)
Total	180	54	25	12
Percent	66.4	19.9	9.2	4.4

as we had earlier using the standard diagnostic nomenclature. We will not report the details of the analysis using this method since it adds nothing to our final results except to emphasize that the standard diagnostic groupings closely parallel degrees of functional impairment.

We also coded each student's psychiatric record for chief presenting complaint, disposition and outcome of the case, the year the student was first seen for help, and the number of years he was seen. Since all of these variables are highly correlated with diagnosis, they are not used as separate variables in the analysis of the data. However, they will be commented upon from time to time as they illuminate the Harvard careers of our sample. The coding categories and frequency distributions for these variables are included in Appendix B.

2. Academic Performance

Academic performance might be considered the ultimate measure of ego functioning in college. For our sample, it is perhaps more than anything else the specific task to be accomplished during the late adolescent years. We measured four types of academic accomplishment: Harvard grades, underachievement, honors graduation, and number of unsatisfactory records.

Harvard grades are categorized into five groups (ranks) by the registrar's office with group one being the best and group five being the worst. Underachievement is the magnitude of the difference between average rank and the rank predicted by the admissions committee from SAT and MAT scores and high school grades. Honors was divided into three categories: highest honors, high honors and no honors. The number of unsatisfactory records is simply the total number of semesters in which a student's grades fell below 3 C's and 1 D.

3. Dropout

Dropout is defined as not graduating on time or not at all after a seven year follow up. We investigated both the events associated with dropping out, and the length of time a student was absent from the college.

4. Discipline

Discipline is defined in our study as being brought before the college authorities for some sort of misdemeanor in the Harvard community such as rioting, destroying property, stealing or plagiarism.

The frequency distribution of each of these measures of college ego functioning is shown in Table 7. It should be noted that this group of Exeter students were quite similar to their Harvard classmates and to groups of students at other schools in terms of the variables mentioned above (Farnsworth, 1966 and Pervin, 1966).

Table 7. Frequency Distribution of Harvard Variables

Seen for help:	Not seen	Seen			
	72%	28%			
Diagnosis:	Neurotic	Character Disorder	Sexual Deviant		
	13%	9.6%	1.9%		
	Schizoid	Schizophrenic			
	1.2%	2.3%			
Harvard grade average:	Group 1, 2	Group 3	Group 4	Group 5	
	19.5%	28.1%	33.6%	18.7%	
Honors:	None	Cum laude	Cum laude, general studies	High honors	
	51.2%	25%	5.4%	18.5%	
Unsatisfactory record:	No	Yes			
	80%	20%			
Discipline:	None	Yes			
	93.7%	6.3%			
Length of drop out:	None	1 year	2 years	Permanent Leave	
	73.1%	11.8%	5.5%	9.6%	
Harvard underachievement:	Overachiever	Predicted Achiever	Underachiever		
	49.8%	16.2%	34%		
Entry to final field:	2nd semester freshman	1st semester sophomore			
	63.6%	10%			
	2nd semester sophomore	1st semester junior			
	8.8%	10%			
	2nd semester junior				
	7.7%				
Number of Extra-curricular Activities:	None	One	More than one		
	48.6%	35.2%	16.2%		

5. Other College Variables

A group of variables were recorded to help broaden the description of the Harvard careers of the students. a) Intended field of concentration on admission was ranked from humanities to physical science and labelled "proposed field humanities". b) "Final field science" is a continuous ordering of the Harvard departments from mathematics to fine arts. A high score on this variable indicates a student was majoring in science senior year. This variable is inversely correlated with "proposed field humanities" which means that students who do not start in science do not switch into science during college. However, many students who start in science will leave the science fields during college. c) "Science graduate plans" orders the career plans of the students from graduate work in sciences to a job in industry. d) "Extra-curricular activities" is the number of activities in which a student participates during his college years. e) "Late entry to field" is the date when the student finally settled on his field of concentration at Harvard. It is ordered from second semester junior year to second semester freshman year.

Findings

A. Relationship of the Teachers' Descriptions to the Background and Exeter Career Data

The various factors and categories used by the Exeter teachers to describe particular students are meaningfully related to other variables which describe the students' Exeter careers. In addition, the various factors and categories used by the teachers while independent in terms of their description of an individual student, are somewhat related to each other in our sample as a whole. The teachers' descriptions of students, however, are almost totally unrelated to the background data about these students.

To form a clearer picture of the kinds of students described differently by their teachers, we will discuss the interrelationship of the various categories and factors derived from the teachers' comments about students as well as the relationship of the teachers' descriptions of students to the background and Exeter career data. The matrix of intercorrelation between the teacher report variables and the background and Exeter career variables is shown in Table 8 while the intercorrelations among the teachers' factors and categories is shown in Table 9.

Three of the scales derived from the teachers' reports, the grind and brilliant factors and the clear thinking category, describe different aspects of the students' intellectual ability and performance and are all somewhat interrelated. However, none of them are related to any of the background variables in the study suggesting that no one constellation of family patterns produces a particular style of intellectual functioning.

Table 8. Intercorrelation of Background and Exeter Career Variables with Factors and Categories from Teachers' Descriptions of Students

Background and Exeter Career	Teachers' Descriptions: grind factor	brilliant factor	likeable factor	active factor	popular factor	masculine factor
scholarship	.245	.068	.132	-.148	-.017	-.055
family disruption	-.021	.052	-.332	.109	-.065	-.035
medical history	-.115	.029	-.041	.132	.148	.070
Exeter instability rating	-.217	-.130	-.219	.013	-.140	-.273
psychiatric care	-.112	.069	-.271	.195	-.104	-.013
Exeter crimes	-.180	.119	-.300	.082	-.104	-.076
Exeter discipline	-.253	.022	-.317	.044	-.118	-.075
sibling order	.088	-.061	.013	.178	.005	.065
number siblings	.005	-.049	.093	-.009	-.017	.078
father's occupation	-.094	.031	-.083	-.057	.142	.067
father's education	.023	.146	-.003	.069	.010	-.110
region of origin	.096	.015	.070	-.167	-.063	.026
grade dispersion	.032	-.039	.073	.034	-.097	-.243
Exeter grade average	.351	.560	.164	.012	-.124	-.118
IQ	-.078	.414	-.017	-.018	-.160	-.092
SAT score	-.020	.476	.013	-.049	-.065	-.112
MAT score	-.055	.318	.050	-.104	-.023	-.009

Table 8. (Continued)

Background and Exeter Career	Teachers' Descriptions: verbal interest category	clear thinking category	imaginative category	over-confident category	teacher concern	science interest
scholarship	-.004	.154	-.053	-.060	-.022	.035
family disruption	.002	-.117	-.060	.053	-.188	-.007
medical history	.017	-.095	.013	-.041	.047	-.065
Exeter instability rating	.038	-.218	-.029	-.108	.061	-.028
psychiatric care	.087	-.164	-.015	-.060	.023	.006
Exeter crimes	.066	-.088	.042	.128	-.180	-.098
Exeter discipline	.087	-.193	.069	.138	-.173	-.234
sibling order	.097	.061	.001	.029	-.039	-.023
number siblings	-.118	.063	.061	.101	.018	-.080
father's occupation	-.070	.096	-.049	-.044	-.019	.165
father's education	.047	.032	.083	-.032	.161	.173
region of origin	.015	.143	-.070	-.037	-.105	.089
grade dispersion	.009	-.061	-.210	-.042	-.034	-.061
Exeter grade average	-.035	.239	.057	.054	.023	.153
IQ	-.031	.024	.269	.036	.087	.255
SAT score	-.034	.078	.238	.043	.035	.172
MAT score	-.097	.116	.174	-.064	.037	.278

Table 9. Intercorrelations Among the Factors and Categories Derived from Teachers' Descriptions of Students

	grind factor	brilliant factor	likeable factor	active factor	popular factor	masculine factor	verbal interest category	clear thinking category
grind factor								
brilliant factor	.234							
likeable factor	.428	.071						
active factor	-.120	.091	-.122					
popular factor	.120	-.038	.258	.101				
masculine factor	.193	.045	.244	.027	.272			
verbal interest category	-.002	.091	-.027	.133	-.013	.040		
clear thinking category	.342	.239	.147	.038	.065	.080	-.122	
imaginative category	-.150	.340	-.017	.281	-.040	.040	.104	.032
overconfident category	.088	.172	-.006	.006	-.111	.028	-.047	.204
teacher concern category	.003	.075	.033	.099	.018	-.007	-.036	.140
science interest category	.196	.147	.129	-.039	-.162	.089	-.038	.238

Table 9. (Continued)

	imaginative category	overconfident category	teacher concern category
grind factor			
brilliant factor			
likeable factor			
active factor			
popular factor			
masculine factor			
verbal interest category			
clear thinking category			
imaginative category			
overconfident category	-.017		
teacher concern category	.235	-.071	
science interest category	.017	-.059	.198

The grind factor is a composite of characteristics used by the teachers to describe the way a student works. In describing the "grind", the teachers focused on the development of character in the traditional sense. A high score on the grind factor is given to students who work very hard and are dependably mature.

At admission the "grinds" were already close to the ideals of the school, i.e., they were given a high stability rating on admittance. They did not get into disciplinary difficulty at Exeter and performed well and consistently academically. Scholarship students were more likely to be grinds, which is not surprising in view of the intense competition for selection of these students and their need to maintain high grades in order to continue their scholarships. Students with a high grind rating were also likely to be high on the interest in science category, which suggests academic motivation at least in one difficult area. Finally, students who score high on the grind factor are likely to meet the Exeter ideals in other ways. They are considered masculine and likeable by the teachers.

There is a very high correlation between the brilliant factor and all the other measures of intellectual ability at Exeter (grades, IQ, SAT and MAT) as contrasted with the grind factor which is related only to Exeter grades or actual accomplishment. The relationship of the brilliant factor to the grind factor and clear thinking category would suggest that teachers are responsive to actual ability but are also responding and influenced in their assessment of that ability by a student's clear presentation of his ideas and the manner in which he presents them.

The students who score high on the clear thinking category, although also considered brilliant by their teachers are not necessarily characterized by high verbal or mathematical aptitude. At the time of admission to Exeter, however, they were considered to be very stable personalities and are also seen by the teachers as very self-confident. From this evidence we can conclude that clear thinking in the teachers' descriptions refers to an incisiveness in thinking and the use of ideas in an assertive or aggressive way.

The imaginative category describes yet another aspect of the student's intellectual style. It is somewhat correlated with the brilliant factor, but is unrelated to the grind factor and clear thinking category. Since the imaginative category is also correlated with the student's IQ and SAT score but not with his grade average at Exeter, it seems to represent verbal intelligence but not academic achievement. Indeed, the imaginative category is related instead to grade dispersion which indicates that the highly imaginative students occasionally fail academically and have a very uneven record at Exeter. The imaginative category is also related to the active factor which describes a student as lively and aware, but unstable, erratic, emotional and moody. It would seem that the imaginative category describes a bright but unusual, strange, or unstable student which the teachers do not understand. It has been suggested that the imaginative category may describe the same type of cognitive style as the O- factor

in the Rorschach (King, 1970).

The likeable, popular and masculine factors that emerged from the teachers' comments describe a student's relationships with others and are all modestly intercorrelated. The likeable factor expresses a teacher's personal response to a student and is the only one of the factors describing interpersonal relations which is related either to background variables or other measures of behavior performance at Exeter. The teachers seem to like the students who were given a high stability rating upon admission to Exeter. In general, they also like those who conform to the image of the school--hardworking, masculine, popular students.

On the other hand, the teachers dislike boys who have been in emotional conflict in the past--those who have had family disruptions or received psychiatric care during childhood. The teachers are probably responding to evidence of depression or anger in these students reflecting the vicissitudes of their childhood. They also dislike boys who commit misdemeanors and pranks while at Exeter.

Most of the variables from the teachers' reports describe mental functioning. The grind and brilliant factors and the clear thinking, verbal interest, and imaginative categories all express various impressions that the teachers have of a student's intellectual functioning. The grind factor focuses on actual accomplishment and effort while the brilliant factor describes inherent ability and intelligence. The clear thinking category focuses on intellectual incisiveness; and the imaginative category describes what appears to be creativity but of a type the teachers do not understand and consider strange. These descriptions of how a student thinks are related to actual performance and behavior in the classroom but are entirely independent of the usual background variables considered in the past history of patients.

The other variables from the teachers' comments describe the student's interpersonal functioning. The teachers comment both upon the way a student relates to them and the way he relates to his peers. They describe how likeable and popular he is, and how nearly he meets the male ego ideal, i.e., how confident and masculine he is. The teachers' descriptions of a student's interpersonal success seem to evolve from current observation of behavior and not the student's background. Only the likeable factor is correlated with vicissitudes in the student's childhood, especially evidence of previous disruption in interpersonal relationships.

In general, teachers' descriptions are influenced by a student's behavior and not his past. There is almost no relationship between the teachers' comments and the socioeconomic background and family structure of our students. Teachers respond to the way a student works, the way he relates to others and the degree to which he corresponds to the ego ideal of the school. Since these are all manifestations of ongoing aspects of ego functioning in high school, it is not surprising that they can be used

as predictors of future ego functioning in college.

B. Harvard Careers of the Four Principal Groups of Students

The various measures of college ego functioning that we have used in this study are somewhat interrelated as would be expected since they all represent different manifestations of a failure to cope with college demands. (The matrix of correlations of all the college variables is shown in Table 10.)

The strong pattern of intercorrelations among the four major measures of ego functioning clearly indicates that emotional impairment affects a student's ability to cope with the demands of the college in many spheres. However, the relationships between the four major variables and the various supplementary college variables such as diagnosis, severity of illness, extra-curricular activities and field of concentration are more complicated. To obtain a clearer picture of these relationships, we also divided each of the four major measures of ego functioning and diagnosis into categories and compared the means of the categories for all the other Harvard variables using a one way analysis of variance (F-test). The results of this analysis are shown in Table 11 for the four major variables and Table 12 for the diagnostic groups. This analysis allowed us to delineate further the Harvard careers of the major groups of men who showed different patterns of ego failure. The men who showed no sign of ego failure will be discussed in the next section as normals.

1. Seen for help

The "seen for help" group of students compared with those who were not seen are serious underachievers at Harvard, as evidenced by lower grades, larger number of unsatisfactory records, and fewer honors. They participate much less in extra-curricular activities and more of them drop out and are disciplined than those men who were not seen. Within this group of men seen for emotional problems, the various diagnostic groups also had distinctive Harvard careers.

a. Schizophrenics. The careers of the schizophrenics at Harvard were filled with recurrent problems reflecting the severity of their diagnosis. They were seen for help repeatedly even though they began having difficulty late in their undergraduate years. When seen for help, they were either sent for long term therapy or hospitalized. Being schizophrenic is also correlated with dropping out. In fact, all dropped out and half left permanently. Their academic records, however, are not distinctive since they left school before they could fail.

b. Schizoids. The Harvard careers of the schizoids do not reflect the severity of their psychopathology. These students had the most successful academic careers of anyone in the study while at the same time participating as heavily in extra-curricular activities as any other men in the sample. They were seen for help late in their Harvard careers and were referred for long term treatment.

Table 10. Intercorrelations of Harvard Variables

	seen for help	depressed complaint	sex complaint	anxiety complaint	study complaint	confidence complaint	homosexual diagnosis
seen for help							
depressed complaint	----						
sex complaint	----	----					
anxiety complaint	----	----	----				
study complaint	----	----	----	----			
confidence complaint	----	----	----	----	----		
homosexual diagnosis	----	-.058	.526	.059	-.057	-.084	
character disorder	----	.160	.158	.205	.403	.448	----
neurotic	----	.236	.153	.244	.296	.283	----
schizophrenic	----	.111	.021	.459	.162	.072	----
length of treatment	----	-.006	.478	.287	.124	.124	.482
disposition	----	.167	.414	.360	.332	.228	.360
no. years problem	----	.356	.280	.389	.788	.550	.054
underachieve	.208	.024	-.081	-.017	.240	.130	-.052
Harvard grades	.227	.018	-.089	.032	.309	.174	-.086
drop out	.285	.183	-.121	.119	.324	.319	-.142
honors	-.183	-.022	.083	-.065	-.263	-.209	.010
graduate plans	-.031	.093	.012	-.113	-.046	.070	.043
proposed field humanities	-.194	.030	-.094	-.175	-.141	-.047	-.070
final field sciences	-.162	.091	-.083	-.141	-.021	-.078	.055
extra-curr. activities	-.250	-.098	.020	-.012	-.189	-.212	.007
late entry to field	.063	.061	.057	.094	.184	.073	-.036
unsatisfactory record	.172	.066	-.031	.079	.281	.237	-.047
discipline	.388	.325	.107	.147	.439	.204	.004

Table 10. (Continued)

	character disorder	neurotic	schizophrenic	length of treatment	disposition	number of years problem	underachieve	Harvard grades	drop out
neurotic	----								
schizophrenic	----	----							
length of treatment	.192	.192	.342						
disposition	.254	.259	.365	.867					
number years problem	.471	.475	.291	.348	.538				
underachieve	.126	.130	-.025	-.031	.082	.185			
Harvard grades	.161	.144	.004	-.083	.081	.263	.578		
drop out	.390	.162	.282	.162	.267	.306	.280	.386	
honors	-.230	.086	-.131	.004	-.119	-.203	-.397	-.718	-.546
graduate plans	-.111	-.001	-.124	-.007	-.042	-.047	-.176	.340	-.242
proposed field-humanities	.119	-.044	-.212	-.163	-.221	-.168	.159	-.073	.017
final field sciences	.109	-.108	-.026	-.243	-.270	-.184	-.187	-.086	-.376
extra-curr. activities	-.201	-.221	-.050	-.187	-.270	-.184	-.187	-.086	-.376
late entry to field	.076	.024	.102	-.034	.033	.177	.136	.271	.350
unsatisfactory record	.259	.124	.050	-.050	.072	.246	.440	.656	.324
discipline	.260	.369	.177	.236	.345	.453	.100	.216	.420

Table 10. (Continued)

	honors	graduate plans	proposed field humanities	final field science	extra-curricular activities	late entry to field	unsatisfactory record	discipline
graduate plans	.315							
proposed field humanities	.088	.125						
final field sciences	-.019	.290	-.529					
extra-curr. activities	.172	.062	.039	.165				
late entry to field	-.270	-.174	.113	.073	.120			
unsatisfactory record	-.369	-.199	.033	.001	.075	.196		
discipline	-.148	.075	-.165	-.102	-.204	.209	.353	

Table 11. Harvard Variables which distinguish among the four major groups

	average rank	overall underachievement	honors	total activities	late entry to field	disposition	year of problem
seen for help	4.21	0.50	2.46	2.08			
not seen	3.62	-0.05	3.20	3.58			
t-test significant	*	*	*	*			
total drop out	4.29	-.59	2.04	1.37	2.78	1.08	1.22
no drop out	3.67	0.00	3.33	3.85	1.73	0.27	0.45
t-test significant	*	*	*	*	*	*	*
drop out 1 year	3.91	0.22	3.00	1.87	2.56	1.09	1.36
drop out 2 years	4.82	1.01	1.80	1.80	3.33	1.20	1.33
drop out permanent	4.57	0.96	1.00	0.50	2.73	1.00	0.96
F-test significant	*	*	*	*	*	*	*
discipline	3.90	0.32	3.17	3.18	1.94	0.59	0.76
no discipline	3.81	0.13	2.97	3.18	2.02	0.48	0.65
t-test significant							
unsatisfactory record	4.94	1.05	2.30	2.93			
no unsatisfactory record	3.42	-0.18	3.21	3.28			
t-test significant	*	*	*				

Table 11. (Continued)

	senior field science	science graduate plans	proposed field humanities
seen for help	3.85	4.75	3.24
not seen	4.62	5.05	3.00
t-test significant	*	*	
total drop out	4.00	4.33	2.75
no drop out	4.60	5.24	3.10
t-test significant		*	
drop out 1 year	4.25	4.75	2.69
drop out 2 years	3.67	4.00	2.00
drop out permanent	3.88	4.00	3.27
F-test significant		*	
discipline	5.00	5.18	3.59
no discipline	4.40	4.98	2.97
t-test significant			
unsatisfactory record	4.29	4.22	2.80
no unsatisfactory record	4.49	5.26	3.15
t-test significant		*	

Table 12. Harvard Variables which distinguish among diagnostic groups

	schizophrenic	schizoid	sexual deviant	character disorder	neurotic	normals	F-test significant
average rank	4.03	3.56	3.53	4.47	4.23	3.72	*
overall under-achievement	0.14	0.12	-0.48	0.73	0.53	-.05	
honors	1.83	3.67	2.80	2.00	2.64	2.97	*
prizes	0.00	0.33	0.20	0.95	0.16	0.29	
total activities	2.17	3.67	3.00	1.33	2.20	3.55	
late entry to field	2.83	1.00	1.80	2.43	2.09	1.98	
disposition	2.83	3.00	3.00	1.43	1.39	0	*
year of first visit to psychiatrist	1.83	3.33	2.80	1.71	1.93	0	*
senior field science	4.00	3.33	3.60	3.62	4.00	4.60	
science graduate plans	3.50	7.00	5.40	4.14	4.98	4.88	
proposed field humanities	1.00	3.00	2.20	2.62	2.70	3.25	

c. Character disorders. The character disorders as a group have the most academic difficulty of anyone in the sample. They receive the most unsatisfactory records and underachieve most markedly. Academic failure seems to be a part of their total pattern of dysfunction. They begin to have emotional difficulty early in their careers and continue to see psychiatrists all during their undergraduate years. Three quarters of them dropped out and most dropped out for longer periods than one year. One third left Harvard permanently. They also have the lowest involvement in extra-curricular activities of the whole sample. When seen for help they presented with problems in self-confidence and were more likely to be given long term therapy than anyone else except schizophrenics. Since there is a wide variety of diagnostic entities in this group the length and intensity of therapy varied considerably.

d. Sexual deviants. At Harvard the sexual deviants were more academically successful than even the normals. There were no signs of academic dysfunction and none dropped out. Their involvement in extra-curricular activities was within the normal range. When seen for help, late in their college careers, all were sent for long term therapy.

e. Neurotics. At Harvard the neurotics presented with a wide variety of problems, especially anxiety. Two thirds were seen briefly and sent out to work out their own problems. The rest were treated with varying lengths of therapy. They were seen early in their careers for academic failure or as minor disciplinary cases. However, their ultimate academic performance was within normal limits. In general, they differed only slightly from the students who did not experience emotional problems.

2. Academic Performance

There is an inverse relationship between Harvard grade average and being seen for help. A similar inverse relationship exists between Harvard grade average and chronicity of illness. Students who do poorly academically complain of apathy and study problems, were more likely to be seen for help early in their careers, and are diagnosed more often as a character disorder.

The achievement of honors is also responsive to the incursion of emotional problems. Less than half of the students who were seen for help received honors while more than 70% of the Harvard class as a whole received honors. However, there is a stronger relationship between grades, dropping out and being seen for help than between honors, dropping out and being seen. This probably occurs because some students fail and drop out, but return and are still able to achieve a low honors ranking at graduation. Failing grades appears to reflect the severity of problems while failure to achieve honors reflects chronicity of problems. While it has not been our major task to compare the nature of students receiving honors with those who do not, it is of interest to note that students who receive honors and are also seen for help are an extraordinary group of students with enormous promise and a significant ability to utilize that inherent talent despite their illness.

We find a strong positive relationship between being seen for help and having a number of unsatisfactory records during the undergraduate years. There is, also, a positive relationship between number of unsatisfactory records and participation in extra-curricular activities. Since the seen for help group do not participate in activities, this finding suggests that perhaps two different groups of students fail to perform successfully at Harvard--those with emotional problems and those whose interests lie primarily in other spheres of college life.

3. Drop out

As would be expected, the students who dropped out of Harvard also underachieved academically as shown by a lower average rank and fewer honors. Few of them entered scientific fields when they came to college which suggests that the drop outs are not students in difficult fields who are dropping out because they cannot cope with the academic demands of the discipline. However, the drop outs who return change fields often after they return and enter their final field late in their careers. However, they do not change generally from harder to easier fields. These findings indicate that the repeated changes of field are the result of emotional instability, not academic incompetence. In addition, the drop outs are markedly less involved than the other students in extra-curricular fields of all sorts. It is also of interest that the students who dropped out were more likely to have lived outside the Harvard Yard in their freshman year. Since students do not have a choice of freshman dormitories, the chance placement in a peripheral dormitory somehow facilitated their dropping out. Perhaps the distant dormitory increased their alienation from all school activities which (as we will see below) also characterized them at Exeter.

We also investigated the length of time a student was absent from college. We divided the length of time a student was absent into three categories (1 year, 2 years, permanently). The frequencies of length of absence are included in Table 7. Students who take one year out of college are very much like the normals in terms of their careers at Harvard except that students who drop out for a year tend not to go into science and are less involved in extra-curricular activities. In contrast, the men who dropped out for two years underachieved while at Harvard. They changed fields frequently and did not participate in extra-curricular activities. More of this group were seen for help and left Harvard for emotional reasons repeatedly during their undergraduate years. The majority were diagnosed as character disorders or schizophrenics. In general, there is a correlation between severity of illness and length of dropout.

The students who leave permanently, on the other hand, dropped out early, often in their freshman year, and did not return to try again. In fact, a third did not stay long enough to have any grade recorded which makes it difficult to compare their academic performance in college with other groups. We do not know whether they went to other schools and how they might have achieved there. For those who did stay long enough to get a grade their academic performance is below average as it also is for the two year drop out group.

To lump all of the drop outs together obscures important differences between the various individual students in the sample. Students drop out for varying lengths of time or forever; they also drop out in different ways, i.e., they fail out, they get sick, they get sick and fail out or they just disappear. To say that a student has dropped out is to say something about him but to say something about the events associated with dropping out and the length of his absence is to say a good deal more. We will discuss the different types of drop outs in the next section.

4. Discipline

The students who were disciplined did not show a different career pattern at Harvard from the other students. To describe students who are disciplined as a group can be misleading. The total group of students who were disciplined obscures the presence of at least two types of distinct and in some ways diametrically opposed students who were disciplined in college. The different groups of students who were disciplined will be discussed in more detail below.

Following the lead of earlier studies of college performance, we have discussed the Harvard careers of four principal groups of students, those who were seen for help, who failed academically, who dropped out, and who were disciplined. Although a few variables differentiated these large groups, for example, those who were seen for help and those who dropped out did not participate in extra-curricular activities, the four measures of ego functioning delineate large but necessarily heterogeneous populations and represent the final common pathway for a variety of problems. Therefore, we further divided these groups based on the presence or absence of other signs of disturbed ego functioning which, we believe, led to a better understanding of underlying conflict in these students. Composite dependent variables based on these combinations of our measures of ego functioning are more clearly predictable entities and allowed us to define more subtle aspects of behavior. The nine composite groups formed from the four principal variables and their frequency of occurrence in our sample are listed in Table 13.

C. The Harvard careers of the composite groups

We will first define the composite groups and then compare their Harvard careers from the results of both a one way analysis of variance (F test) and T-tests between all possible pairs of groups. The results of this analysis are shown in Table 14. We will discuss only those variables on which the groups differed significantly (at the .05 level).

1. Normals. This group was defined by the absence of evidence of disruption of ego functioning in college although they could also be defined by the presence of distinctive careers both at Exeter and Harvard. These students more than the other groups had a very successful college career, achieved the highest average rank, highest honors and greatest number of prizes. Indeed, they achieved far beyond the expectations of

Table 13. Frequency Distribution of the Nine Major Dependent Variables

	Number	% of sample
normal	125	46%
seen for help	27	10%
seen and drop out	19	7%
seen and unsatisfactory record	28	10%
seen and discipline	7	2%
discipline only	10	4%
drop out only	19	7%
unsatisfactory record only	30	11%
unsatisfactory record and drop out	6	2%

Table 14. Harvard Variables which Distinguish Among the Nine Composite Groups

	seen and discipline	discipline only	seen, drop out, unsatisfactory record	unsatisfactory record and drop out	unsatisfactory record only	seen only	drop out only	seen and drop out	normal
average rank	3.43	4.22	5.15	4.78	4.81	3.73	3.43	3.70	3.30
overall under-achievement	-0.13	0.64	1.30	0.38	0.85	0.06	0.15	0.07	-0.30
honors	3.29	3.10	1.54	2.00	3.10	3.11	1.74	2.68	3.50
prizes	0.29	0.30	0.04	0.00	0.23	0.15	0.00	0.21	0.38
total activities	2.14	3.90	1.57	4.33	3.90	2.67	0.32	1.89	4.06
late entry to field	2.00	1.90	2.89	2.50	2.56	1.22	2.94	2.60	1.62
disposition	1.43	0	1.46	0	0	1.60	0	2.05	0
year of first visit to psychiatrist	1.71	0	1.64	0	0	2.15	0	2.10	0
senior field science	4.14	5.60	3.92	3.82	4.56	3.81	4.21	3.79	4.74
science graduate plans	4.85	5.40	3.73	4.33	4.43	5.39	4.53	4.84	5.37
proposed field humanities	3.00	4.00	2.46	1.67	3.73	2.30	3.05	2.81	3.10

Table 34 (Continued)

	F-test significant	T-test significant
average rank	*	
overall under-achievement	*	
honors	*	
prizes	*	
total activities	*	
late entry to field	*	
disposition	*	
year of first visit to psychiatrist	*	
senior field science		2 vs 3, 4, 7
science graduate plans	*	
proposed field humanities	*	

the Harvard Admissions Committee. These students were also the most involved in extra-curricular activities of all sorts which suggests that they were particularly well rounded. Many of the normals begin in science fields and continue with science plans in the future in marked contrast to the problem groups who may start in science fields but do not remain in them. The energies of these students seemed to be turned both to achievement and adaptation in whatever area they happened to give their attention. There was not only an absence of evidence of turmoil but considerable evidence for the presence of conflict free ego functioning. The normals seem to flower in college, performing better than they had at Exeter and superceding everyone else in all aspects of college life.

2. Seen for help only. Those who were seen for help and did not have any other signs of disturbed ego functioning presented an interesting transition between the normals and the rest of the students in our study.

These students maintained a pattern of stability even in the presence of psychological problems at Harvard. Their academic careers were reasonably successful but showed some signs of the interference of their illness in their performance. For example, they underachieved more than the normals and were uninvolved in extra-curricular activities.

When seen for help, usually late in their college careers, they were diagnosed as having a character disorder or neurosis and were sent for long term treatment. Despite the range in psychopathology exhibited by these students, they shared certain ego strengths and a capacity to maintain nearly normal functioning in college.

3. Seen for help and dropped out.* These students did well but did not live up to their promise. They earned fewer honors and prizes than the normals and fewer of them concentrated in scientific fields. They changed fields more often than most of the other groups as the result of repeated dropping out, but eventually most completed their college careers. Another important manifestation of their emotional impairment was their marked lack of involvement in extra-curricular activities.

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* Being seen for help and dropping out are closely related phenomena; 63% of all the students who dropped out were also seen for help. Students often seek psychiatric counseling on their way out of college. If a student is also failing he appears even more likely to see a psychiatrist. It would seem then that when a student drops out with an unsatisfactory record he is more likely to be seen as having an emotional problem than if he were just dropping out or just had an unsatisfactory record. Academic failure appears to have a connotation of illness, for the majority of students, if it is linked to dropping out. The response from both the students and the school is to label concrete evidence of failure as emotionally determined. The student is treated as sick and probably encouraged to drop out.

This group contained some of the most severely disturbed patients in the sample (most of the schizophrenics and none of the sexual deviants) as evidenced by the number of hospitalizations and length of therapy.

4. Seen for help, dropped out and unsatisfactory record.* These students showed the greatest degree of academic failure in college of the whole sample. They achieved the lowest average rank, the fewest honors, the greatest incidence of unsatisfactory academic records, and ultimately the greatest underachievement. They dropped out early in their careers and returned often, having the most frequent or repetitive incidents of dropping out. They were like other students with emotional problems in that they participated very little in extra-curricular activities and dropped out of scientific fields during their undergraduate years. However, they appeared to be less emotionally impaired as a group than the much more successful seen for help and dropped out group since they were given less severe diagnoses (for problems presented mostly as study and self-confidence difficulties) and treated most frequently with short term therapy.

5. Seen for help and disciplined. The students who were disciplined did not show a different pattern at Harvard from those who were not disciplined. If we further divide this group, however, it appears that there were two quite distinct types of students who got into disciplinary difficulty in college--those who were disciplined and who were also seen for help and/or dropped out and those for whom being disciplined was an isolated phenomenon in their college careers. The seen for help and disciplined group did very well at Harvard, achieving slightly better than expected. Their behavior resulting in disciplinary action was seen as symptomatic of an emotional problem and they were sent for psychiatric care. They, more than the other groups, were considered to have character disorders when seen by the psychiatrists (there were no schizoids, schizophrenics or sexual deviants in this group) and were referred for long term therapy. The episode for which they were disciplined did not seriously impair their college performance in the long run. Although many of them dropped out, all returned and most graduated with honors.

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* The findings reported for this group are intended also to represent the findings for another group with which it is nearly synonymous, the seen for help, and unsatisfactory record group. The findings are virtually identical for the two groups because the seen and unsatisfactory record group is composed of twenty-eight students, twenty-four of whom also dropped out. It appears that most students (85%) who get an unsatisfactory record and are seen as a patient also drop out. Only three students who were seen with an unsatisfactory record did not drop out.

6. Disciplined only. It would appear that this group of men who started and remained in science fields was overreaching their ability because they underachieved academically more than the other groups. However, they maintained a high involvement with extra-curricular activities, especially athletics. The misdemeanors for which they were disciplined were not considered really serious since they were neither expelled nor sent to see a psychiatrist by the administrative board. One might wonder if the action for which they were disciplined represented an expression of frustration over their academic struggles or a breakthrough of aggressive impulses in otherwise very obsessionally controlled boys who have a tendency to action.

7. Dropped out only. At Harvard the dropped out only group left most often in their first year and two thirds of them did not return at all. None of them received a prize and very few earned honors. They were also the least involved group in extra-curricular activities, probably because their stay at Harvard was so short. It would seem that this group was probably the alienated youth in our sample, the negativistically uninvolved.

8. Unsatisfactory record only. At Harvard the grade average of this group was almost lowest for the whole sample and the underachievement the greatest. Their failure was apparently related to trying science courses early in their careers and failing at them; they changed their programs more frequently than anyone else. Although this group contained the greatest proportion of scientists freshman year, by senior year it contained fewest men making science a career. It was in the extra-curricula activity area that these students achieved their greatest success. They were the most involved group in almost every activity, from clubs to sports.

9. Unsatisfactory record and dropped out. In college, this group did not underachieve as much as other students but Harvard's expectations for them were not so great as for the other groups. Their academic failure appears to be an expression of their limited ability. Although they failed and dropped out, all eventually returned and graduated. These students were not sick or alienated; they were oriented toward social and athletic interests and probably were overwhelmed academically.

D. Background and Exeter Careers of the Four Principal Groups of Students

As in the analysis of Harvard careers reported above, we first investigated the background and Exeter careers of the four principal groups of students (seen for help including diagnosis, academic failure, disciplined, dropped out). The analysis is based on a series of F-tests in which the categories of the four major variables are compared on all the background, Exeter career, and teacher report variables. The results of this analysis are shown in Table 15 for the four principal groups of students and in Table 16 for the diagnostic groups of students who were seen for help. This single variable analysis will show which of the background and the teachers' description variables are useful in

Table 15. Background and Exeter Variables which differentiate among the four major groups

	Exeter punishment	Exeter grades	MAT	SAT	grade dispersion	grind factor	brilliant factor	likeable factor
seen for help	1.10	6.61	6.80	6.62	2.14	2.37	2.93	2.54
not seen	0.71	6.86	6.93	6.48	1.72	2.54	2.94	2.61
t-test significant								
total drop out	0.92	6.78	6.88	6.59	2.18	2.34	2.86	2.47
no drop out	0.43	6.71	6.85	6.42	1.73	2.55	2.94	2.63
t-test significant	*					*		*
absent 1 year	0.78	6.87	6.97	6.73	1.73	2.42	3.00	2.50
absent 2 years	1.46	6.55	6.39	6.02	3.65	2.12	2.67	2.55
drop out permanent	0.77	6.81	6.87	6.74	1.79	2.37	2.78	2.39
F-test significant	*			*	*	*	*	*
discipline	0.64	6.71	6.22	6.15	1.84	2.40	2.97	2.48
no discipline	0.55	6.73	6.88	6.48	1.85	2.49	2.91	2.60
t-test significant			*					
unsatisfactory record	0.99	5.79	6.58	6.34	1.87	2.27	2.75	2.32
no unsatisfactory record	0.75	7.06	6.94	6.54	1.80	2.56	2.97	2.61
t-test significant		*	*	*		*	*	

Table 15. (Continued)

	masculine factor	teacher concern category	verbal interest category	imaginative category	overconfident category	clear thinking category	medical history	Rosier instability rating
seen for help	2.25	5.11	5.01	4.28	2.85	3.42	1.57	1.40
not seen	2.30	5.05	4.79	3.98	3.18	3.66	1.14	1.42
t-test significant				*			*	
total drop out	2.15	5.05	4.68	4.21	3.08	3.71	1.32	1.41
no drop out	2.36	5.07	4.92	3.96	3.08	3.55	1.20	1.41
t-test significant	*		*					
absent 1 year	2.16	4.95	4.84	4.13	3.25	3.93	1.72	1.38
absent 2 years	2.15	5.05	4.83	3.88	3.11	3.20	1.20	1.47
drop out permanent	2.14	5.16	4.38	4.49	2.84	3.72	1.46	1.54
F-test significant								
discipline	2.31	5.04	4.93	4.26	3.71	3.70	1.47	1.23
no discipline	2.28	5.07	4.85	4.01	3.04	3.58	1.23	1.42
t-test significant					*			
unsatisfactory record	2.34	5.03	4.79	4.02	2.91	3.58	1.33	1.39
no unsatisfactory record	2.28	5.08	4.87	4.03	3.13	3.59	1.28	1.42
t-test significant								

Table 15. (Continued)

	psychiatric care	family disruption	youngest sibling
seen for help	0.24	0.44	2.57
not seen	0.20	0.30	2.47
t-test significant			
total drop out	0.22	0.41	2.45
no drop out	0.21	0.30	2.54
t-test significant			
absent 1 year	0.31	0.50	2.53
absent 2 years	0.27	0.27	2.47
drop out permanent	0.08	0.38	2.35
F-test significant			
discipline	0.53	0.53	2.65
no discipline	0.19	0.32	2.51
t-test significant	*		
unsatisfactory record	0.16	0.42	2.71
no unsatisfactory record	0.23	0.30	2.45
t-test significant			

Table 16. Background and Exeter Variables which differentiate among the diagnostic groups

Exeter variables	neurotic	character disorder	sexual deviant	schizoid	schizophrenic	normal	F-test significant
punishment	0.75	1.48	0.20	1.33	3.00	0.83	*
grades	6.29	6.86	7.60	8.17	6.53	6.62	
acad. discipline	0.11	0.05	0	0	0	0.03	
MAT	6.71	6.96	6.48	7.37	6.87	6.79	
SAT	6.45	6.92	6.55	7.22	6.40	6.49	*
grade dispersion	1.85	2.96	2.09	1.69	1.64	1.80	
Teacher Report Variables							
grind	2.37	2.37	2.61	2.33	2.39	2.49	
brilliant	2.86	2.93	3.22	3.25	3.06	2.87	*
likeable	2.48	2.64	2.88	2.12	2.51	2.61	*
masculine	2.14	2.29	2.70	2.35	2.46	2.27	
teacher concern	5.13	5.02	5.25	5.02	5.25	5.00	
verbal interest	5.01	4.89	5.34	5.23	5.04	4.63	
imaginative	4.30	4.10	4.20	4.74	4.56	3.76	*
overconfident	2.82	2.83	3.26	2.86	2.80	3.08	
clear thinking	3.30	3.52	3.92	3.33	3.53	3.77	
Background Variables							
medical history	1.57	1.81	1.00	1.33	1.33	1.21	
Ex. instability rating	1.43	1.29	1.40	1.66	1.50	1.35	
psychiatric care	0.22	0.29	0.20	0.33	0.17	0.17	
family disruption	0.61	0.24	0.20	0	0.33	0.31	
youngest sibling	2.64	2.48	2.60	2.67	2.33	2.54	

distinguishing among students with various patterns of ego functioning in their college careers. This analysis will also delineate the variables which describe a particular group of students. Multivariate analysis techniques used to determine the relative importance of the background and teacher report variables in the prediction of ego functioning will be discussed below.

1. Seen for help. The future psychiatric patients performed intellectually as well as the other students at Exeter but did show a tendency to unevenness in their academic records. Stability ratings on admission to Exeter and visits to a psychiatrist at Exeter, however, do not differentiate the patient from the non-patient group. The data do suggest, however, that having a significant medical history implies a traumatic separation and predisposes a student to future emotional illness. In contrast, a family disruption so often considered important in the history of psychiatric patients has only a tendency in our data to be present in the backgrounds of our patient population.

The teachers give us some excellent clues to the future difficulties of the patient group as a whole. The teachers describe this group as significantly lower on the grind factor and the confidence category than their peers. More importantly, the teachers responded to something strange and weird in these students. They did not label them as sick but called them unusual and imaginative. Teachers are not psychiatrists and are not likely to be predisposed to viewing students as sick even in this psychologically sophisticated era. They do, however, respond to differences from the average of the school. The future patients were, on the whole, good students but unusual in some strange way to the teachers, that prompted them to mention it.

a. Schizophrenics. The future schizophrenics were considered nearly the most imaginative students in the sample which is not surprising since there is a positive linear relationship between the rating on the imaginative category and severity of illness.* Otherwise, the schizophrenics do not distinguish themselves from their peers at Exeter, with one very provocative exception, i.e., the future schizophrenics were likely to have a record of disciplinary charges against them. This would suggest that discipline at Exeter is associated with this specific clinical state. That the schizophrenics are charged with more offenses but do not have a higher incidence of actual punishment would indicate that the school accepts some of their misbehavior. We know that the type of "crimes" charged against the schizophrenics are of a passive and

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* This finding is similar to that of Watl, et. al., 1970, who discovered the mention of strangeness in the high school records of future schizophrenics.

personal nature, that is, crimes of smoking and drinking. Passive crime is probably more acceptable to the school than is an actual incident of aggression. It would be of interest to know why these students get caught smoking and drinking when other students do not, since illegal smoking and drinking are not uncommon at Exeter. The current research unfortunately cannot answer this question. A number of possibilities could explain this behavior ranging from a need to be caught to carelessness and preoccupation which characterizes these students prior to acute schizphrenic breaks.

b. Schizoids. In contrast to the future schizophrenics, the future schizoids had very high grades at Exeter. The teachers also considered them brilliant even though they rated them lowest on the likeable scale. This is unusual in our data since the brilliant factor often reflects how much a teacher admires a boy as well as how bright he is. Apparently, the fact that these students are really the most brilliant in the sample (with the highest SAT and MAT scores) impresses the teachers even though the teachers do not like them. These students also have the highest rating of the entire sample on the imaginative category.

c. Character disorders. The future character disorders are not distinguished from their peers at Exeter except for their relatively high rating on the imaginative category. This diagnostic group is too much of a composite of various types of patients to have presented a distinctive pattern at Exeter. However, cross tabulation of medical history and psychiatric diagnosis shows that these students had more major surgery during childhood than anyone else in the study.

d. Sexual deviants. The future sexual deviants, along with the schizoids, were the most successful students at Exeter. These two groups were also considered the most brilliant by the teachers. However, the schizoids deserved a high brilliant rating more than the sexual deviants since they had significantly higher SAT ratings than the sexual deviants. However, the sexual deviants were the most likeable students in the sample while the schizoids were the least likeable which may have influenced the teachers' ratings of the two groups on the brilliant factor. The teachers appeared to be overvaluing the performance of students they liked and were possibly responding to the seductiveness of these future homosexuals.

5. Neurotics. This collection of diagnostic entities is not distinguished from other students at Exeter except that they share an elevated rating on the imaginative category with all of the patient groups. However, a cross tabulation of family disruption and diagnosis shows the future neurotics have a increased incidence of family disruption in their backgrounds. Moreover, cross tabulation of medical history and diagnosis shows the presence of a significant medical history involving both major surgery and long term illness in the childhood of the neurotics.

2. Academic Performance

It is to be expected that there would be a linear correlation between a student's grind and brilliant rating at Exeter and his Harvard grades (Lavin, 1966). The grind and brilliant factors reflect how hard a student worked at Exeter and how intellectually endowed he was. It might also be expected from findings of other studies that there would be a similar but inverse relationship between a student's rating on the masculine scale and his grade average. There is also evidence that students who are "happily brought up", like adults, and are secure (who would score high on the likeable factor), and those who are strong and healthy (who would score high on the popular factor) should receive average grades in college. These expectations are borne out in the present study as the students with average grades in college appeared as likeable, popular and athletic to their high school teachers while the students with high grades appeared as competent grinds or brilliant. However, the data do not show an inverse relationship between the masculine rating and grade average. The students who score high on this factor receive average, not low grades at Harvard.

Students who are noted as "hostile, aggressive", and "aware" (all of which are part of the active factor) perform better in their freshman year, while students low on the active factor, i.e., are "patient" and "modest", perform less well in their freshman year. This finding does not hold up after the freshman year. Apparently a student's degree of activity or passivity either helps or hinders his immediate adjustment to the college situation. A high rating on the imaginative category is also associated with a lower freshman grade average. Since the imaginative category is closely correlated to the severity of illness, this finding would suggest that sick students have trouble in their freshman year which is reflected in their grade average.

To achieve honors at Harvard a student must not only have the requisit. ability but must be able to utilize that ability consistently. He must also be motivated to achieve academically since honors graduation requires extra work in the senior year. Exeter grades and a high rating on the brilliant factor are highly correlated with the level of Harvard honors a student receives. Students who score high on the grind factor are also more likely to receive honors. However, the relationship between the grind rating and honors is not linear. A high grind rating is associated with low honors and a medium grind rating with high honors. This finding suggests that students who are overly conscientious and try very hard are not usually the most brilliant students. A tendency in the data also suggests that students with a high rating on the interest in verbal studies category are more likely to get honors--the higher the rating, however, the lower the level of honors. This would add weight to the view that the verbal interest factor measures involvement rather than ability. High involvement and effort predict low honors while high actual ability predicts high honors. The number of siblings in a family is also inversely related to the level of honors which is consistent with findings from other studies of the relationship between the number of siblings and academic achievement.

Approximately one quarter of the total sample had an unsatisfactory record at some time during their undergraduate years. Since the students in our sample are all sufficiently well prepared and bright enough to do well at Harvard, the presence of an unsatisfactory academic performance in a student's record is considered presumptive evidence of a disturbance in ego functioning. As a group, those with unsatisfactory records tended to be the youngest children in large families. Their Exeter grades were significantly lower than their peers as were their MAT scores, although they did not vary from the rest of the sample on the SAT. The Exeter teachers rated them lower on both the grind and brilliant factors than the other students. Their teachers also felt these students showed little interest in science and tended to be more involved in extra-curricular activities, especially athletics. As a group the future unsatisfactory record group appeared at Exeter more as athletes than as scholars. These students were not only less intelligent than the rest of the sample but they did not try as hard. At Harvard their academic performance was lower than their peers and also lower than what was considered their potential at the time of admission. A pattern of academic mediocrity and under-achievement is persistently associated with these students from high school to college.

3. Drop out

Dropping out of college during the years of this study was relatively uncomplicated and free from the effects of the Selective Service. Students were not discouraged from taking time to find themselves. The students in our study who dropped out of college had already displayed a distinctive history of both disciplinary offenses and academic failure at Exeter. In addition to actual academic failure, there is a tendency for a greater dispersion of grades in the records of the future drop outs. This pattern of behavioral and academic discipline implies erratic behavior in and out of the classroom. The teachers respond to this behavior by seeing these students as very low on the grind factor which reflects both work habits and personal responsibility. The teachers also rate the future drop outs low on the verbal interest category and only average on the science interest category. They are rated low on actual academic accomplishment while not rated different from the rest of the students on the brilliant factor of which actual academic accomplishment is a part. The implication is that these students were not unable academically but were passively or actively rebellious.

The future drop outs were also rated low on the masculine factor which suggests not only a lack of involvement and conformity with organized athletics but also a skew with the all-American ideal. A very low rating on the modest category (without a significantly different rating on the active factor of which modest is a part) and the popular and likeable factors would argue for a view of the future drop outs as unwilling to cooperate rather than passively withdrawn and dependent. The future drop outs thus present a variety of signs of aggression and disengagement with the environment to which people respond negatively.

The students who are absent from college for only one year are not significantly different from the rest of the sample while at Exeter. In contrast, the students who stay out two years are quite distinctive at Exeter. They showed the most marked dispersion of grades and they were the only future drop outs who were on academic probation at Exeter. Their difficulties as students at Exeter are revealed in very low grind and brilliant ratings which can be expected from their lower SAT and MAT scores. They were not as bright as the other students at Exeter but they also worked less hard.

The students who leave Harvard permanently were also different from the other drop outs while at Exeter. They were disliked by their Exeter teachers but were considered less hostile and more aware than the students who finished late at Harvard. There is also a tendency in the data for the permanent drop outs to have a low rating on the interest categories. Teachers evidently did not like them because although they worked hard they were uninvolved but not overtly hostile.

4. Discipline

The background and Exeter career of the students who were disciplined at Harvard is quite different from their peers while their career at Harvard is similar except for the incidence of disciplinary action. As a group they had academic difficulties at Exeter as evidenced by a high incidence of academic discipline. Their academic failure was apparently considered to have an emotional component since these students were referred for psychiatric consultation more often than any other students in the sample.

The future disciplinary cases were not seen by their teachers as unable or insecure, but as erratic, aloof and overconfident. Finally, students who were to be disciplined at Harvard are more likely to be considered to be dishonorable and to have a bad character while they were at Exeter.

E. Background and Exeter Careers of the Nine Composite Groups

Generally, a few background and teacher report variables differentiated the four large groups of students. For example, all the students who were seen for help in this study were different from the rest of the sample in that they were considered by the teachers as imaginative, interesting, unconventional, weird and different. In addition, the students who dropped out seemed unable to meet the demand of the teachers for certain behavioral patterns including a conformity with a well defined masculine role. Further, the students who fail in college are not as intelligent and do not try as hard in high school as the rest of the sample. Finally, all of the students who were future disciplinary cases were seen by their teachers as over-confident. Numerous other variables, however, generated misleading findings about these large, heterogeneous groups. Therefore, we also compared the backgrounds and Exeter careers of the nine composite groups used earlier in our analysis of the Harvard data, using F-tests and

T-tests between all possible pairs of groups. The results of this analysis are shown in Table 17. As in previous sections of this report we will discuss only those variables on which the groups differed significantly (at the .05 level).

1. Normals. There was a conspicuous absence of signs of difficulty in the past history and in the records of these students at Exeter. They had little dispersion of grades and no academic failure. The teachers ranked them high on the brilliant factor but not the highest; and in the middle on the grind, masculine, and confidence factors. However, these students were apparently pleasing to the teachers since they are rated very high on the likeable factor. The future normals were well behaved students who did well but not too well, who tried hard but not too hard, and who pleased their teachers. Comparing these students to the other groups in our sample, we find not only an absence of the signs predictive of future difficulty, but a presence of moderation, stability and good interpersonal relationships. If the teachers did note signs of turmoil they considered it within normal limits and did not mention it. The turmoil, if present, did not interfere with ego functioning in the school setting.

2. Seen for help only. None of the background variables significantly differentiate this group from the rest of the sample. The teachers considered them very brilliant which is a curious over-evaluation of their intellectual aptitude in view of their actual Exeter performance and their low ranking on the clear thinking category. This finding may be partially explained by their very high ratings on the likeable factor and verbal interest category suggesting that teachers were responding to certain pleasing personality qualities in their evaluation of the academic promise of this group. Teachers also rated these students very low on the confidence category which implies a certain passivity, helplessness and lack of aggressiveness in their character. The teachers liked these students, yet there was evidence in high school of future difficulty. They were more insecure, passive and confused in their thinking than the other men. The teachers also gave them a high rating on the imaginative category which implies the presence of a certain strange creativity.

3. Seen for help and dropped out. These students emerged as a very impressive group at Exeter. They received the best grades and the teachers considered them the most brilliant of all the groups. This is borne out by their ratings on educational testing since they had the highest rating on MAT and next highest on SAT. Despite their considerable actual ability and generally high performance, they were the only group who had a significantly great dispersion of grades which probably indicates an episodic interference in their performance by their problems. This episodic interference did not deter the teachers from rating them highest on the grind factor. Such a high grind rating implies, we suggest, rigidity and indicates a highly developed but perhaps brittle obsessional defensive structure. Since they were such good students and worked so hard it was inevitable that the teachers would rate them high on the likeable factor, yet there was something about these students which the

Table 17. Means of Background and Exeter Variables which Differentiate Among the Nine Composite Groups

Exeter Variables	seen and discipline	discipline only	seen, drop out and unsatisfactory record	unsatisfactory record and drop out	unsatisfactory record only	seen only	drop out only
punishment	1.29	0.20	0.89	1.67	0.56	0.40	0.52
grades	7.11	6.43	5.77	5.49	5.84	6.51	7.60
academic discipline	.43	0	.04	.17	.17	.07	.0
MAT	6.62	5.95	6.57	6.55	6.78	6.82	6.96
SAT	7.10	5.48	6.37	6.08	6.26	6.65	6.74
grade dispersion	1.80	1.87	1.84	1.80	1.67	1.87	1.85
Teacher Report Variables							
grind	2.03	2.65	2.08	2.50	2.40	2.54	2.41
brilliant	3.00	2.95	2.80	2.45	2.80	2.97	2.79
likeable	2.37	2.55	2.41	2.56	2.64	2.66	2.40
masculine	2.58	2.45	2.16	2.52	2.53	2.36	1.87
teacher concern	5.04	5.04	5.12	4.38	5.08	5.12	5.08
verbal interest	4.84	4.99	4.92	5.06	4.60	5.25	4.13
imaginative	4.39	4.16	4.23	2.84	4.09	4.19	4.12
overconfident	3.43	3.91	2.84	2.73	2.91	2.75	3.61
clear thinking	3.49	3.85	3.31	3.48	3.90	3.14	3.97
Background Variables							
medical history	1.57	1.40	1.82	1.50	.90	1.52	1.26
Exeter instability rating	1.00	1.40	1.39	1.67	1.33	1.52	1.52
psychiatric care	.57	.50	.21	.16	.07	.33	.16

Table 17. (Continued)

	seen and drop out	normal	F-test significant	T-test significant
Exeter Variables				
Exeter punishment	0.79	0.42	*	
Exeter grades	7.80	7.00	*	
Exeter academic discipline	.0	.02	*	
MAT	7.07	6.97		2 vs 9
SAT	6.72	6.48	*	
grade dispersion	3.07	1.70		8 vs 9
Teacher Report Variables				
grind	2.70	2.58	*	
brilliant	3.05	2.98	*	
likeable	2.65	2.98	*	
masculine	2.18	2.31	*	
teacher concern	5.12	5.07	*	
verbal interest	4.83	4.89	*	
imaginative	4.48	3.88	*	
overconfident	2.84	3.14	*	
clear thinking	3.96	3.56	*	
Background Variables				
medical history	1.31	1.18		3 vs 9
Exeter instability rating	1.37	1.42		1 vs 7
psychiatric care	.10	.20		1, 2 vs 5

teachers had difficulty in explaining something strange, weird, or unusual, which resulted in these students being given the highest rating on the imaginative scale. In addition, the teachers also described them as very passive and unsure of themselves. The future difficulties of the "seen for help and dropped out" group were suggested at Exeter in the teachers' personality descriptions of them, not in their inherent ability or academic performance. Strong defenses and natural ability kept these students going until their problems overwhelmed their ability to cope at the college level.

4. Seen for help, dropped out, and unsatisfactory record. At Exeter the students who were to go on to have an unsatisfactory academic record at Harvard and drop out of college were almost the worst performers in the sample, despite their average SAT and MAT scores. Their poor academic showing appears not to have been due to a lack of ability, but to a lack of organized effort (as revealed by the lowest rating on the grind factor of the whole sample), little interest in science, and their demonstration of confused thinking. Like the rest of the students with an unsatisfactor record, their grades were significantly lower at Exeter than the rest of the sample. Their bungled academic performance is paralleled by their low ratings on the masculine factor and self-confident category. The teachers also liked them less than the other students. In general, these students displayed impairment of functioning both in and out of the classroom at Exeter.

5. Seen for help and disciplined. These students were disciplined at Exeter for all sorts of reasons including academic failure. This finding is of particular significance since these students had the highes SAT scores for the whole sample and relatively high MAT scores. Further manifestations of this group's inconsistent behavior were found in the teachers' comments. They were considered lowest of all the groups on the grind factor and interest in science category, and only relatively high on the brilliant factor. This group was brilliant but erratic, which apparently led the teachers to undervalue their ability. The teachers were also very critical of them, rating them least likeable in the whole sample. It would appear that these students were very able and functione well most of the time. They did, however, have incidents of failure whic were episodic, self-limited and probably symptomatic. It is also to be noted that the group had one of the highest ratings on the imaginative category in the sample.

The group was also high on the self-confidence scale and highest on the masculine factor for the entire sample, which suggests a tendency to action. Despite their rating on the masculine factor which suggested goo athletic ability, these were the only students who were significantly uninvolved in extra-curricular activities at Exeter, including athletics. These students are able and involved but ambivalent and rebellious towar the school organization. One might interpret this disciplinary record as evidence of a need to have someone to contend with and to be punished.

6. Disciplined only. These students, in contrast to the other students disciplined at Harvard (the seen and disciplined group) were the least likely to have been disciplined for any reason at Exeter. They did not have a history of academic failure despite the fact that they had the lowest SAT and MAT scores in the entire sample.

A clarification of this seeming contradiction can be found in the teachers' comments. The disciplined only group were rated very high on the grind factor. These men were over-achievers whose effort and interest impressed the teachers and led them to over-value their ability. In addition, these men had a high ranking on the masculine factor and the highest rating of any group in the sample on the over-confidence category. It is of interest that these students, like all future disciplinary cases at Harvard, had a history of psychiatric treatment at Exeter. Since neither academic failure nor misdemeanors could have prompted teachers to send these students for psychiatric assistance, perhaps some aspects of the impression they created suggested emotional problems to the teachers. A student who is aggressive and overconfident evidently rubs Exeter teachers the wrong way, resulting in his being sent to the psychiatrist. It is the future disciplinary problems, not the future psychiatric patients who were seen for psychiatric consultation in secondary school.

7. Dropped out only. These students were superior performers at Exeter, and did not get into disciplinary difficulty either academically or personally, in contrast to the rest of the total drop out sample. Being a good student and not getting into trouble are usually considered virtues at Exeter, yet the Exeter teachers did not like them. They felt that they were lacking in interest in their studies and rated them lowest on this category. There was a tendency for this group to have been seen by the Health Service as more unstable at the time of admission to Exeter than the rest of the sample, which we suggest is merely evidence of their skew with the Exeter norms from the beginning of their schooling. These students are a unique group who were functioning well academically but without enthusiasm and with evidence of hostility. They were known for the clarity of their thinking which implies a certain intellectual aggressiveness and were considered over-confident. They were rated low on the masculine factor which reflected not only a lack of masculine ego ideal but also the inability to relate "man to man". It was in the area of interpersonal relationships that these students seemed to have the most difficulty; they did best in subjects where the subject matter was impersonal, such as mathematics.

8. Unsatisfactory record (only). This group had the lowest incidence of a significant medical and psychiatric history of the entire sample. Teachers saw them as low, but not lowest on the grind and brilliant factors and the self confidence category, but in the highest range on the masculine, likeable, and extra-curricular involvement factors. These students did not underachieve or get into academic disciplinary difficulty at Exeter, despite their significantly low grades. There emerged from this pattern of findings a group of students of relatively limited ability and motivation who functioned best in non-academic areas. Even when they

didn't try as hard as they might and follow academic expectations at Exeter, their teachers still liked and admired them because of their pleasing personalities and good masculine identities.

2. Unsatisfactory record and dropped out. These students, while at Exeter, had a difficult time academically, achieving the worst grades in the sample. Their academic difficulty was at least partially due to their relatively lower intelligence as measured by their IQ and SAT ratings. The teachers considered them the least brilliant in the sample and were more concerned about them than anyone else. In fact, they are the only students about whom the teachers explicitly expressed concern. Therefore, we can postulate that teacher concern reflects concern about academic failure and not personal difficulty. This view is borne out by the finding that these students were average on the likeable and very high on the masculine factor, both reflecting the good opinion of the teachers. On the other hand, these students had the highest incidence of disciplinary punishment of anyone at Exeter, something that one would expect the teacher to dislike. The teachers expressed concern about these students and yet liked them because these students met their norms as men although not as academic performers. Their misbehavior was interpreted as an extension of their masculine assertiveness and not as hostility or aggression.

Multivariate Analysis

Although it seems to us from inspection of the F-tests that the teachers' comments are more important than background and Exeter career variables in predicting ego functioning in college, this assumption must be checked. Unless the teachers' reports make a significant contribution to the prediction of ego functioning, there would be no point in examining them since the background and school record data are much more easily obtainable and interpretable.

To test whether the teachers' reports contribute anything to the prediction of ego functioning in college, we employed two multivariate analysis techniques: regression analysis, and multiple discriminant analysis. To describe the purpose of the multivariate analysis in this study, it is necessary to think of each of the dependent variables in the study (or measures of ego functioning) as being caused* by a number of factors, some of which we have measured in the study and some of which we have not measured. In other words, the total variance in the dependent

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* Although in many multivariate studies causality cannot be firmly established, the longitudinal nature of the present study allows us to establish the direction of causality since the independent variables occurred prior in time to the dependent variables.

variable can be accounted for partly by the independent variables in the study and partly by unknown variables. The multiple regression coefficient (when squared) gives us the percentage of the variance in the dependent variable which is accounted for by all the independent variables we have measured. In social science studies, crude methods, multiple causation and complicated chains of events are so often present that scientists consider themselves lucky if they can explain 50% of the variance in a dependent variable or have a multiple regression coefficient greater than .70.

The beta weights or standard regression coefficients also tell us the relative weights of each of the independent variables in producing the multiple regression coefficient. In other words, they describe the relative contribution of each of the independent variables to predicting the dependent variable. Another useful property of the beta weights is their independence. They represent the contribution of each of the independent variables holding constant all of the other independent variables.

Table 18 gives the standardized regression coefficients or beta weights for each of the background and teacher report variables in the study when the four major dependent variables and psychiatric diagnosis (or measures of ego functioning) were regressed on them. As can be seen from Table 18, not all of the dependent variables could be entered in the regression analysis. The number of students who were disciplined at Harvard was too small (17) to be used as a variable as were the schizophrenic, schizoid, and sexual deviant diagnostic groups.

Examining the multiple regression coefficients, at the bottom of Table 18, we see they ran uniformly in the 50's. The greater proportion of the variance in all of these factors remains to be explained by variables not included in the study, presumably personality measures and emotional factors in the family background setting. However, considering the complexity of the variables indicating emotional problems in college (seen for help, drop out) the mixed bag of students that manifest these problems, and the restrictions of using only recorded data, we felt that the multiple regression coefficients were remarkably high. It is interesting to note that the multiple regression coefficients for the various measures of academic performance at Harvard are lower than those noted by the staff of the Harvard Student Study, probably reflecting the less consistent performance of the private school student between secondary school and college as has been previously reported (MacArthur, 1954).

The major question, however, in the present study is whether the variables derived from the teachers' reports have added anything to the prediction of various types of ego functioning in college beyond what can be learned from a knowledge of the student's background and secondary

Table 18. Beta weights from Regression of Several Types of Ego Functioning in College on Background Variables and Exeter Teachers' Reports

Background Variables	seen for help	drop out	unsatisfactory record	honors	Harvard grade average	under-achievement	disposition (severity)
family disruption	.063	-.047	.060	.009	.016	-.012	.041
medical history	.177*	.059	.093	-.192	.198*	.164	.087
psychiatric care	.009	-.138*	-.026	.054	.047	-.039	.131
sibling order	.060	.088	.169	.100	.044	.038	.043
father's occupation	.052	.096	.101	.038	.072	.027	-.079
Exeter instability rating	-.019	.061	-.065	.005	.011	.095	-.038
Exeter crimes	.030	.209	.020	-.021	-.106	-.089	.094
Exeter grades	-.611	-.397	-.897*	.748	-.923*	-.868*	-.342
grade dispersion	.147	.149	.249*	-.346	.345	.291*	.094
Teacher Descriptions							
grind factor	-.027	-.101*	-.204*	-.011	-.067	-.053	.111*
science interest	.105	.171	-.029	-.092	-.017	.017	.120
brilliant factor	-.052	-.158*	-.130*	.129*	-.231*	-.189*	.028
verbal interest	.118*	-.229*	.084	.104	.004	.007	.060
likeable factor	-.064	-.167*	.075	.089	-.022	.019	-.138*
clear thinking	-.063	-.041	.175	.092	.047	.039	-.015
active factor	-.095	.019	.027	.026	-.039	.031	.084
imaginative	.226*	.209*	.059	-.051	.068	.041	.219*
popular factor	-.063	-.102	.076	.073	-.074	.064	.060
overconfident	.048	.020	-.036	-.005	.002	.001	.002
masculine factor	-.019	.074	.045	-.011	-.089	.072	.012
leader	.088	.079	.027	.046	.005	-.006	.120
teacher concern	.089	.004	.035	.062	.039	.033	.077
multiple R	.53	.58	.52	.56	.62	.75	.56

* Statistically significant and non-trivial variables.

Table 18. (Continued)

Background Variables	neurotic	character disorder
family disruption	.140	.010
medical history	-.063	.104
psychiatric care	.067	.021
sibling order	.013	.052
father's occupation	.076	.013
Exeter instability rating	.066	.003
Exeter crimes	-.136	.169*
Exeter grades	-.512	-.763
grade dispersion	-.087	.140*
Teacher Description Variables		
grind factor	-.109*	.017
science interest	.104	.016
brilliant factor	.138	.038
verbal interest	.034	.047
likeable factor	.158	-.130*
clear thinking	.060	.097
active factor	.060	.001
imaginative	.197	.119
popular factor	-.004	-.124*
overconfident	.048	-.067
masculine factor	.120	.059
leader	-.130	.073
teacher concern	.018	-.028
Multiple R	.56	.48

* Statistically significant and non-trivial variables.

school record.* On the whole, the background variables contribute much less to the regression equation than the variables derived from the teachers' reports. In Table 18, all of the starred variables represent statistically significant and non-trivial (coefficient greater than .10) additions to the regression equation. When considering the dependent variable "seen for help", only medical history among the background variables contributes significantly to the equation while both "verbal interest" and "imaginative" among the variables derived from the teachers' reports make significant contributions. In fact, the "imaginative" category is the single most important variable in predicting "seen for help" as has been commented on above.

The one significant background variable "psychiatric history" which negatively predicts dropping out (or in other words, predicts finishing on time) is overwhelmed by many significant variables from the teachers' reports that contribute to the prediction. The grind, brilliant, and likeable factors and the verbal interest category all negatively predict dropping out, while the imaginative category positively predicts dropping out. The usefulness of the "imaginative" category in distinguishing the men who both saw a psychiatrist and dropped out has been mentioned above.

Of the two psychiatric diagnostic groups large enough to be included in the regression equation, the "neurotic" group seems to be a mixed bag, not very well delineated by any of the variables in the study. None of the background variables make significant contributions to the regression equation and only the "grind" factor from the teachers' reports describes this group of disturbed, but not very sick young men. They are not particularly brilliant and imaginative as are the schizoids, neither are they "unmasculine" as are the sexual deviants. In short, they are a varied group of men with many different problems and neither background factors nor the teachers' reports does very well in distinguishing them from the other diagnostic groups and the normals.

The character disorders, however, are a more clearly defined group, set apart primarily by their unpopularity with both their teachers and their peers. The teachers' reports predict this diagnostic group about equally well with the Exeter variables. These men leave tracks in the disciplinary records of the school and in the unevenness of their performance that are almost as useful in predicting their future psychiatric diagnosis as their unpopularity with teachers and classmates.

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* We have omitted a few background variables from this analysis which showed insignificant zero order correlations with the dependent variables and SAT, MAT and predicted rank list which are highly correlated with Exeter grade average and which would produce collinearity problems in the regression equation.

Although we could not include all of the diagnostic groups in the analysis, we could order the students on severity of illness according to our "disposition" variable and regress this measure of severity of illness on the background factors and variables from the teachers' reports. As can be seen from Table 18, no background variables contribute significantly to the prediction of severity of illness although three of the variables from the teachers' reports make significant contributions, "grind" and "likeable" factors and the "imaginative" category. The association of these categories with many measures of ego failure in college has been discussed extensively above. Suffice it to say that they are the only variables in our study that contribute to an understanding of severity of emotional problems when all other variables are held constant.

It would be difficult to predict college grades more adequately than from the standard prediction equation of secondary school grades combined with aptitude and achievement tests. After all, these variables are all essentially school achievement variables and should predict future school achievement better than any other variables. Whereas, we could not expect teachers' reports to predict college academic performance better than grades and tests, we hoped the variables derived from the reports might at least make an independent contribution to the prediction of college performance. In terms of Harvard underachievement,* Exeter grades and grade dispersion are, of course, the most important predictors--Exeter grade average as a negative predictor (or a predictor of overachievement) and grade dispersion as a positive predictor. The brilliant factor, derived from the teachers' reports makes a significant if slightly less important addition to the equation. Knowing whether his secondary school teachers consider a student brilliant or stupid adds something to our knowledge of a student's performance in college that cannot be derived from a knowledge of his secondary school grades alone.

To check our findings we also regressed Harvard grade average** on the same variables with virtually identical results as can be seen from Table 18. No matter whether one is speaking of straight college performance or underachievement in college, secondary school grades are the best predictor followed by grade dispersion for predicting underachievement but not grade average. However, the teacher's assessmen

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* We could not include predicted rank list in the regression equation for underachievement since underachievement is based on the discrepancy between predicted rank list and actual Harvard grades.

** In reading Table 18 it must be remembered that Harvard grades are measured in items of rank list and a low rank list (1 or 2) represents the best grades.

of the student's intellectual capabilities* also contributes to the prediction of his future performance, independently of what grades that teacher gives him in secondary school.

The measure of honors received at Harvard is somewhat independent of grade average (zero order R = .680) as it represents a choice to pursue extra work for honors requirements as well as good grades. Probably because honors graduation from Harvard involves this choice element, it is not predicted nearly as well by Exeter grades as the other college performance measures we have considered above. This may be partly due to the presence of emotionally disturbed men in the sample who get good grades but are too debilitated by their problems to do the extra work required for honors. Exeter grades are not a significant predictor of honors graduation from Harvard. However, being considered "brilliant" by the Exeter teachers is a significant predictor, the only one.

The number of unsatisfactory records received by a student describes both the level of his academic performance at Harvard and the unevenness of that performance. Although the two measures of performance (grade average and number of unsatisfactory records) are correlated (.656), we felt there was sufficient variance left unexplained in the number of unsatisfactory records to consider it separately in the multivariate analysis. In addition, several of the psychiatric cases in our sample had at least one unsatisfactory record in their undergraduate careers, and then went on to achieve a high average rank.

The prediction of unsatisfactory records at Harvard involves almost exactly the same variables as underachievement and average Harvard grades with the exception that the "grind" factor from the teachers' reports predicts unsatisfactory record while it is not a significant predictor of any of the other college performance measures. It would appear that the men whom the Exeter teachers see as undependable, immature, and irresponsible, come a cropper at some time (mostly freshman year) during their undergraduate years although in the long run they pull themselves together and have almost as good overall grades as their classmates.

Although regression analysis has been used extensively by social scientists in predicting what are essentially dummy variables, such analysis involves certain dubious assumptions about linearity that perhaps

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* The reader is reminded that the students on which no teachers remarked about intellectual ability are omitted from the sample, probably making the comments more independent of grades. If the teachers had just been forced to rate every student, the measures would probably have been so closely related to grades as to make no independent contribution to the regression equation.

might lead to unwarranted conclusions. To check the validity of our findings we also performed a multiple discriminant analysis on the "seen for help" and "drop out" variables which really contain only two categories. Since multiple discriminant analysis is a regression type of analysis modified to deal with dependent variables that cannot be scaled, it makes no assumptions about linearity in the dependent variable. The results of that analysis on "seen for help" and "drop out" is virtually identical to the results of the regression analysis reported above and will not be examined further here.

Although the regression analysis reported above gives us a good indication of which individual variables in our study contribute most to the prediction of the various measures of college ego functioning, we would also like to compare the total group of teachers' report variables with the total group of background variables to see which group as a whole contributes most to the prediction of our dependent variables. We can do this by comparing the multiple regression coefficients for those dependent variables which meet the assumptions of scale and linearity involved in regression analysis. Table 19 compares the multiple R's of the teachers' report and the background variables for the dependent variables describing college performance.

As we have discussed above, the background variables, more particularly the measures of Exeter performance and aptitude testing, are better predictors of Harvard performance than the teachers' reports. This is especially true of Harvard grade average which is predicted almost entirely by Exeter grade average. It is less true of unsatisfactory record, and teachers' reports do almost as well predicting honors and underachievement as do the Exeter performance and background variables.

To compare the predictive power of the teachers' reports and the background variables for the dependent variables which are not scaled, we used multiple discriminant analysis. Instead of comparing the multiple R's for the two groups of variables, however, we can only note whether each group of variables is a significant discriminator among the categories of the dependent variable or not. For drop out, seen for help, and psychiatric diagnosis, the teachers' report variables when considered as a group significantly discriminated among the various categories of the dependent variable while the background variables did not discriminate significantly on either drop out, seen for help, or psychiatric diagnosis.

It would seem that the teachers' reports are of great usefulness in predicting ego functioning in college other than straight academic performance. These reports are of lesser usefulness in predicting college academic performance although it is quite clear they make some independent contribution even to that prediction.

Another question which we have touched on in this discussion but which should be examined in more detail is the overall usefulness of the various categories in the teachers' reports for predicting ego functioning.

Table 19. Multiple Regression Coefficients of Teachers' Reports and Background Variables on Various Measures of College Performance

	Honors	Unsatisfactory Record	Underachievement	Harvard Grade Average
Teachers' Reports	.358	.333	.205	.301
Background Variables	.375	.433	.269	.834

Some of the descriptive categories are much better predictors than others. To compare the predictive power of the various teacher report variables, we can either compare the regression coefficients listed in Table 18 or the scaled vectors from the multiple discriminant analysis. Since the two analyses give almost identical results for the variables that were analyzed using both methods, for ease of presentation, we shall examine only the regression coefficients from Table 18.

Although certain of the teachers' report variables delineate special groups of men with particular problems in college, for example, the relation between being called over-confident and getting into disciplinary troubles and masculine and having an unsatisfactory record without being seen for help, in general the teachers' reports of the students' school motivation and cognitive style are the best predictors of their future functioning in college. This is not surprising since most of the demands made on our subjects in college are intellectual. They are required not only to be brilliant and interested but also punctilious, dependable, honest, and responsible in their intellectual endeavors. Thus the categories that best predict future functioning are the grind and brilliant factors and the verbal interest categories all of which relate to the compliance with similar intellectual demands at Exeter. The realm of intellectual style and acumen is not the most important predictor of emotional problems in college, however. The whole range of these personal problems appears to be predicted best by the teachers' assessment of a student's interpersonal attractiveness (likeable), and relationships with his peers (popular), and general nonconformity displayed primarily intellectually which the teachers call "imaginative".

The predictive power of these teachers' reports and the particular categories that are important have very interesting implications, both for understanding the nature of adolescent turmoil and emotional breakdown and for delineating the nature of the secondary school press and the demands made on the adolescent in that environment. These implications will be discussed in the concluding section of this report.

Conclusions

We have established that the Exeter teachers' descriptions of the students in our sample distinguish between those who were successful and those who had problems in college. Moreover, the teachers' reports distinguish among the different manifestations of troubled ego functioning--needing psychiatric help, dropping out, having an unsatisfactory record, being disciplined, and various combinations of these. The groups of students with different patterns of ego failure in college appear to have shown at Exeter distinctive patterns of behavior that their teachers were aware of and spontaneously recorded with considerable accuracy.

1. Seen for help

All the students who were seen for help in this study were different

from the rest of the sample in only one way at Exeter, i.e., they were considered by the teachers to be the most "imaginative, interesting, unconventional, weird, and different". The rating on the imaginative category is directly correlated with the severity of illness ranging from neurotic to schizoid. The teachers do not call the students in the future "seen" group "sick" while at Exeter because they are not overtly so at the time, but they do call them "different". Students who are going to be sick in the future are already different in mid-adolescence; students who would not become sick in college were not seen as different in high school.

The prediction of specific diagnoses is very difficult and only partially achieved in this study. The more specific and clear cut the clinical syndrome the greater number and better predictors we are able to find for that particular diagnosis. The two smallest and most discrete diagnostic groups, i.e., the sexual deviants and the schizoids, are the most clearly delineated from the Exeter data.

Background and behavioral data, however, assume an importance in the prediction of specific diagnoses. The schizophrenics are noted for a history of passive crimes at Exeter. The character disorders have a significant medical history and the neurotics have a significant history of family disruption. At Harvard the various diagnostic groups revealed the impact of their psychopathology on their work and play in distinctive patterns reflective of the degree of impairment of their ego functioning. In general, it would appear that the best way to distinguish large groups of patients is by their rating on the imaginative category. However, this category, as we have noted earlier, is more predictive of severity of illness rather than specific diagnosis.

2. Academic performance

On the whole this study supports the often observed finding that the level of academic performance in college is highly correlated not only with the level of performance in high school but with the consistency and degree of the student's effort in high school. Likeable athletes become average students. Passive and emotionally troubled students have difficulty academically even though they are the brightest students in the sample.

Honors graduation and grade average are highly correlated at Harvar but not synonymous. The observations about students at Exeter which predict a level of academic performance also predict honors. Howe the level of honors is related to actual ability shown at Exeter, not necessarily to effort. The students who impress their teachers with the intensity of their effort and interest but who were not necessarily brilliant received low honors, while the brilliant students at Exeter achieved high honors. The achievement of honors is less likely in the patient group and seems to require an even greater ability and persister than for non-patients. The patients who do not achieve honors are inherently more able than other students who do not achieve honors, but

the future patients are not able to utilize that ability, probably because of their psychological difficulties.

3. Drop out

All students who dropped out share a certain tendency to disengagement and negativism as their mode of handling intrapsychic conflict. When in conflict, these students seemed unable to meet the demand of the teachers for certain behavioral patterns including a conformity with a well defined masculine role, good obsessional defenses, and clear evidence of involvement. The failure to meet expectations and the presence of a varying degree of passive aggressive character traits elicits dislike.

Dropping out for most students seems to be an attempt to solve academic or emotional problems. The exception to this observation is the drop out only group who express their alienation by dropping out. They seem to want to drop out. The rest of the students who drop out have to do so.

4. Discipline

There emerge two quite distinct groups of students from this analysis, both of whom became disciplinary problems at Harvard. One group, the discipline only group, had limited ability but tried very hard academically and athletically. Their effort was seen as over-achievement and over-confidence at Exeter but the effort was admired. At Harvard they continued to try but were frustrated with science courses beyond their ability. They dealt with that frustration by acting out and getting punished for their effort. The other group, the discipline and seen group, were exceptionally able and had the leeway to be erratic in their performance and still be very successful. Their behavior was provocative to the teachers at Exeter and elicited a good deal of anger. They were rebellious students who seemed determined to engage the censure of the school.

In addition to discussing the predictors of gross patterns of ego failure in college, we have delineated specific patterns of ego functioning which can be more clearly predicted. These patterns permit more precise definition of character structure and provide further insight into the meaning of symptomatology. In this study, we defined nine composite groups whose college careers are distinctive and predictable from the reports of their secondary school teachers. They are summarized below:

1. The well rounded successes (normals): These students defined the mean of all the virtues at Exeter and displayed a conspicuous absence of any sign of future difficulty. At Harvard they achieved more than what was expected of them in all areas.

2. The unsure (seen for help only): These students who were able but unsure of themselves were in other ways like the normals in the sample. They became patients in college but did not otherwise express

emotional conflict.

3. The brittly brilliant (seen for help and dropped out): These students who were overly conscientious and brilliant but unsure of themselves deviated from the masculine ideal at Exeter. They became patients in college and their conflicts interfered with their college careers so much that they had to drop out.

4. The rebels (seen for help and disciplined): These students who were brilliant but rebellious and had a firm masculine identity at Exeter became patients as a result of their rebelliousness in college. Their revolt, however, did not seriously interfere with their academic success.

5. The chronic underachievers (seen for help, dropped out and unsatisfactory record): These students who were underachieving, insecure and deviant from the Exeter ego ideal in all ways failed in college, became patients, and eventually dropped out.

6. The alienated (dropped out only): The students who performed well at Exeter but would not conform were heartily disliked. At Harvard they left almost as soon as they arrived and almost nothing is known about their subsequent history.

7. The unable (unsatisfactory record and dropped out): These students showed signs of limited ability and had self doubt and difficulty in dealing with frustration. The intellectual demands of the college overwhelmed them and they dropped out. However, most of them returned and graduated.

8. The ordinary (unsatisfactory record only): These students of somewhat limited ability overextended themselves academically in college and failed, but reorganized with a new and easier program and graduated without other signs of disturbed ego functioning.

9. The overachievers (disciplined only): These students overcompensated for their limited ability by aggressiveness and hard work. They acted out their frustration when their efforts did not bring the expected success in college.

What general conclusions about the prediction of ego functioning in college can we draw from the differences among these nine groups of men?

It would seem that any extreme from the norm in a teacher's view of a student implies a problem in character formation and consequently the prediction of a specific difficulty in future ego functioning. On the whole, the level of academic accomplishment in secondary school is predictive of future academic accomplishment. However, great variation in either direction from the mean of ability, work patterns or actual level of accomplishment is suggestive of future difficulty. The brightest students in our sample turned out to be the most emotionally impaired in college, while the least able had few emotional problems but repeated

academic difficulties.

A pattern of working also appears to be used adaptively or maladaptively. The future patient group had shown either a rigidly overconscienti work pattern or an inability to maintain a consistent one. In addition, a student's use of thinking in an overly assertive way or his inability to do so is suggestive of difficulty, as is an over-involvement with, or an impairment of, verbal communication with his teachers. Generally, if one compares how students work and how "imaginative" they are, one is able to define all of the patient groups in this study on the basis of only two observations by their teachers. The imaginative category appears to reflect the depth of psychopathology and the grind factor the nature of the character defenses.*

A lack of successful interpersonal relationships and overt evidence of aggression are also associated with future difficulty. Aggression manifested by behavior reflective of passive resistance or active opposition predicts similar behavior in the future. Long term feelings of anger, depression, competitiveness or isolation also presage future problems in handling these same feelings. In addition, any variation from a masculine ego ideal and a comfortable degree of self confidence is associated with future ego failure. Too great an involvement with the masculine ego image implies a narcissistic and compensatory over-investment in one area of functioning while too little involvement implies a passive withdrawal in response to certain demands of the school environment. An excess of self confidence appears to be an acting out of feelings of rebellion or counterdependency while a lack of self confidence seems to be an expression of concern over real or fantasized limitations in a demanding environment. Such concerns continue in college and disrupt the student's ability to cope.

Behavior in secondary school which attracts the official attention of the school is predictive of future disruption of ego functioning. However, the underlying problem is expressed and treated differently in various social structural contexts making the relationship between the Exeter behavior and the future difficulty complex. Discipline in secondary school seems to be of two types: one, an active expression of frustration over failure or rebellious feelings which is predictive of similar acting out in the future, and the other is the result of being passively caught which is suggestive of future emotional difficulties manifested in illness rather than misbehavior. In addition, psychiatric

* These findings are similar to those of Watl, et. al. (1970), who studied the school records of a group of schizophrenics. They conclude that a substantial proportion of children destined to become schizophrenic can be identified by their behavior in public school before they break down.

treatment in secondary school for members of this sample is primarily directed to students who attracted attention by being aggressive or not meeting academic standards. There is no correlation between psychiatric treatment in secondary school and future psychiatric treatment.

Our data suggest the conclusion that normal adolescent development occurs within limits which the Exeter teachers do not consider to be tumultous. If the normal students in this study are undergoing psychic turmoil during their mid-adolescence, it is internal, private and within expectable limits of ego functioning and object relationships in a school setting. It would appear that investigators in focusing on psychopathology have generalized from patients to normal development and have presented a special version of human development. The changes occurring in normal development are not suggestive of symptom formation or maladaptive character development.*

The Exeter teachers' comments reflect enduring characterological qualities in an ostensibly symptom free population. It appears that character formation is already well established, whether it is adaptive or maladaptive by mid-adolescence. At that time, one can predict the direction of future development by knowing the nature of the character structure. The students with the maladaptive character formation become symptomatic in college when their psychic apparatus is no longer able to cope with the new demands placed upon it. The composite variables in this study describe symptom complexes of a failing psychic apparatus.

The teachers' comments also suggest that the student-teacher transaction is both intellectual and interpersonal. Teachers react primarily to a student's ability and the way he works and both of these elements are part of his evaluation of a student's future potential. Teachers, however, also react to a student's interpersonal style, vis-a-vis himself and the student's peers, and his adherence to the American masculine ideals. These interpersonal evaluations, moreover, are reflected in the teachers' assessment of a student's academic potential. Furthermore, teachers are aware of deviations from the average in terms of both interpersonal and cognitive style and label such deviations as unusual, weird or imaginative. The implications of these findings and the ability to predict future ego functioning among different types of teachers will be discussed in a subsequent publication.

We have addressed ourselves in this research to the nature of adolescent turmoil and believe we have made a contribution to the study

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* These conclusions are quite similar to those found by King in a study of a random sample of Harvard students (King, 1970).

of adolescent psychology by differentiating between the life histories of adolescents who have been able to work through the adolescent transition and those who have not, using only easily obtainable recorded data about the students.

We have shown that teachers acting as participant observers can report with a sufficient degree of sensitivity the complex communication a student presents in the classroom or dormitory so that the record can be used to predict future behavior. Teachers have maintained for years that grades do not reflect the real promise of the students as well as do their comments about students. Our findings not only corroborate teachers' faith in the depth and accuracy of their own observations but suggest the need for greater attention to such observation in future research on educational processes. We have delineated the differential power of biographical data, secondary school performance and behavior, and the evaluation of secondary school teachers in the prediction of ego functioning in college. Most importantly, we believe we have found a method of developing predictors of future ego functioning which is general enough to be used in a number of settings.

Replications of this study on a variety of populations are either under way or planned for the future. We also intend to do a follow up study of these populations to answer a number of theoretical questions left implicit in the current research. For example, is apparent normal development into late adolescence predictive of future adaptation and personal fulfillment or are some of our normal adolescent group masking underlying pathology by compliance which will interfere with the resolution of their next stage of psychosexual development, as Zetzel (1970) has suggested. On the other hand, can it be that the adolescent turmoil displayed by certain students may be only transiently symptomatic and not disabling in the long run? We expect that the results of this project and the future research planned will help psychiatrists in the early detection and consequently the early treatment of the casualties of the adolescent period and will help school administrators and counselors in advising students about their current difficulties and future plans.

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APPENDIX A

Grind Factor

2111 Outstanding, exceptional, superior, among the best
2112 Successful, has gotten a lot out of Exeter, credit to Exeter
2116 Satisfactory, average
2113 Undistinguished, total loss, a disappointment, has problems
2122 Promising, deserving, deserves scholarship
2123 Undeserving, should not be at Exeter
0142 Well-organized, neat, accurate, thorough
0143 Careless, sloppy, inaccurate
0722 Neatness (physical and personal), well-organized, methodical
0723 Sloppy, dirty, disorganized
0162 Overachieves
0166 Working up to potential
0163 Not working up to potential
3032 Wants good marks
3052 Wants education, wants to learn
3042 Wants to improve, get more out of Exeter
0191 Plugger, grind
0192 Conscientious about doing work regularly and well, studious, good study habits, good effort, good attitude
0193 Not conscientious, poor attitude, effort, etc.
3022 Desires maturity, wants to be considered mature or sophisticated
0522 Mature
0523 Immature
0642 Hardworking, industrious
0646 Gets work done
0643 Lazy, wastes time
0182 Steady worker
0183 Uneven worker, erratic
0692 Takes self seriously
0693 Does not take self seriously
0842 Purposeful, serious-minded, earnest
0843 Lack of direction, wandering
0712 Conscientious, reliable, dependable, responsible
0713 Unreliable, not responsible or dependable
0782 Good character, good citizen, honorable, fine, sincere, high integrity
0783 Bad character, bad citizen
0652 Drive as motivation, ambitious, self-motivated, competitive
0653 Unambitious, lack of drive
3072 Wants to do well, to succeed, to win
3242 Wants to grow
3252 Wants to get into Harvard, Yale

Brilliant factor

0032 Good in science
0033 Bad in science

0052 Creative in science
0053 Uncreative in science
0062 Good in verbal studies
0063 Bad in verbal studies
0082 Creative in verbal (subtle), poetic
0083 Uncreative in verbal
2042 Actual accomplishment academic
2043 No actual accomplishment academic
0151 Excellent
0152 Doing well academically, good grades
0156 Fair
0153 Not doing well
0091 Superior academically
0092 Good academically, good student
0093 Bad academically
0172 Good preparation (for Exeter)
0173 Bad preparation
2092 Prediction about successful life, promising
2093 Prediction about failure in life
2102 Prediction about academic success
2103 Prediction about academic failure
0102 Intellectual curiosity, alert, interested, attentive, teachable, retentive, scholarly, discerning, perceptive, deep thinking, intuitive
0106 Shallow, superficial (intellectually), dilettante
0103 No intellectual curiosity, inattentive, indifferent, mental rigidity, bored
1082 Likes schoolwork
1083 Doesn't like schoolwork, has phobia about tests
3122 Wants to be considered intellectual or cultured
0111 Fast learner
0112 Learning all the time
0116 Somewhat slow
0113 Slow learner
0222 Well-read, well-informed, travelled, advantages, cultured tastes or interests
0223 Not well-read, etc.

<u>Likeable factor</u>

2012 Good behavior
2013 Bad behavior
1072 Interested in adults, gets along well with adults
1076 Shy or ill at ease with adults
1073 Not interested in adults, skeptical of adults
1102 Likes parents
1103 Doesn't like parents
1122 Likes teachers, respects teachers, gets along well with teachers
1123 Doesn't like teachers, doesn't respect teachers, underestimates teachers

3062 Wants contacts (includes any "apple polishing")
3082 Wants to please, make good impression
1052 Sensitive, generous, sympathetic, tolerant, understanding
1053 Insensitive, self-centered, egotistical
3182 Wants own way
1252 Helpful, altruistic, civic responsibility, social conscience
1253 Useless, ineffectual
1151 Conformist
1152 Spontaneous
1153 Non-conformist
1162 Docile, willing
1166 Horseplay, mischievous
1163 Rebellious, resents authority
3162 Wants to be moral, good
1192 Cooperative
1193 Uncooperative
3092 Wants to do right thing, accepted thing
1171 Response to teasing good
1173 Response to teasing bad
1231 Well-mannered
1233 Ill-mannered
0531 Behavior mature
0533 Behavior immature
0632 Candid, straightforward
0633 Sneaky, devious
0771 Likeable
0773 Unlikeable
0801 Happily brought up
0803 Unhappily brought up

Active factor

0672 Alert, aware
0673 Preoccupied, dreamy, vague, absent-minded
2022 Active
2063 Passive
2062 Fast moving, alert, vital, enthusiastic, energetic, lively, eager
2063 Slow moving, slow talking, not enthusiastic, deliberate
1032 Outgoing, friendly, fun, sociable, extrovert
1036 Retiring, shy, quiet
1033 Very shy, withdrawn, lone wolf, introvert, aloof, lonely
1042 Warm, demonstrative, communicative, responsive
1043 Cold, uncommunicative
1062 Easy to know, easy to understand
1063 Hard to know, hard to figure out
3012 Wants friends, to be popular, "one of the fellows"
3212 Wants to have good time, be amusing
3232 Wants affection
1201 Chip on shoulder, aggressive, stubborn
1202 Assertive, upholds views, determined, persistent, argumentative
1206 Has courage of convictions, firm but not overbearing

1203 No definite stand, passive, gives in, lacks courage of convictions, negative
1182 Not hostile
1183 Hostile
1212 Talks too much, noisy
1216 Articulate, good conversationalist
1213 Doesn't say enough, quiet, doesn't express self well, inarticulate
0202 Talks in class, contributes to class
0203 Doesn't contribute
0562 Solid, stable, steady, even-tempered, calm, well-adjusted, well-balanced
0563 Flighty, erratic, emotional, moody, emotionally disturbed
0582 Controlled, rigid, restrained, inhibited
0586 Normal
0583 Lack of control, undisciplined temper, uninhibited, impulsive, quick to anger
0572 Patient
0573 Impatient
0621 Self-effacing, meek
0622 Modest
0626 Proud
0623 Show-off, braggard, disdainful, conceited, pretentious, arrogant, self-presenting

Masculine factor

2052 Actual accomplishment athletic
2053 No actual accomplishment athletic
2072 Athletic, likes athletics
2073 Not athletic
3172 Wants to be good athlete
2082 Good with hands, coordinated, good artist, musician
2083 Bad with hands, awkward, lacks coordination
1242 Strong loyalty to school, interest in school, appreciates school
1243 Complains about school, thinks gypped on marks
1262 Loyal to family, friends, neighborhood, etc., close to, dependent on
1266 Independent of family, friends, neighborhood, etc.
1263 Breaking away from, rebelling against, disloyal to, embarrassed by
3132 Desires to be at Exeter
0502 Firm identity, firm goals, strong character
0503 Lack of identity, goals, weak character
0512 All-American boy, normal, masculine
0516 A little out of touch, misfit, soft
0513 Abnormal, queer, odd, eccentric, strange, feminine
0541 Mind better developed than body
0542 Overall evenness of development, well-rounded
0543 Body better developed than mind
0592 Expansive
0593 Constricted, bookish
0602 Happy, cheerful
0606 Troubled

0603 Unhappy, sorry for self, whining, complaining, sullen
0612 Not depressed
0613 Depressed
0682 Encouraged, optimistic
0683 Discouraged, pessimistic, disappointed
0702 Practical, common sense, good judgement, realist
0703 Impractical idealist

Popular factor

1012 Respected
1013 Not respected, teased, criticized
1022 Many friends, popular, well liked
1026 Few friends, accepted, tolerated, gets along
1023 No friends
1112 Likes peers
1113 Doesn't like peers
3142 Wants to be social success
3152 Wants dates, girls
3192 Wants to be attractive
0551 Easy-going, loose jointed, secure
0552 Takes things in stride, adaptable
0553 High-strung, tense, insecure, self-conscious, worrier, suspicious
0862 Courageous
0866 Timid
0863 Fearful, cowardly
0732 Naive, simple, inexperienced
0733 Sophisticated, affected, dramatic, tries to appear sophisticated
0792 Humor, fun
0793 Humorless
0832 Strong, healthy, sturdy, big
0836 Some physical handicap, obese
0833 Small, frail
0881 Under pressure from parents, dominated by parents, high-powered or brilliant family hard to live up to
0882 Strongly influenced by parents
0836 Parents don't want to pressure, not strongly disciplined by parents
0833 Over-protected, over-indulged, parents over-solicitous

Teacher concern

1222 Teacher says he wants to do something about boy, feels concerned about boy, hopes for the better, etc.

Clear thinking

0852 Profits from own mistakes, learns from experience
0122 Clear thinking
0123 Confused thinking

Imaginative

0742 Imaginative, interesting, unconventional, unusual, different
0746 Conventional
0743 Colorless, uninteresting, inconspicuous
0752 Breadth of interest
0753 Narrowness of interest
0812 Radical ideas
0826 Liberal, open to new ideas
0823 Conservative, closed mind, opinionated
3202 Wants to be individualist, different

Leader

1132 Leader
1133 Follower
1142 Self-sufficient, resourceful, independent, self-possessed, self-contained
1143 Dependent, needs support, needs prodding
3112 Wants to be leader, important, center of attraction, respected, wants attention

Interest in science

0042 Interested in science
0043 Not interested in science

Verbal interest

0072 Interested in verbal
0073 Not interested in verbal
3102 Wishes had more intellectual prowess

Extra-curricular

2032 Extra-curricular
2033 No extra-curricular
2062 Actual accomplishment extra-curricular
2063 No actual accomplishment extra-curricular
1692 Likes extra-curricular
1693 Doesn't like extra-curricular

Brilliant

0011 Brilliant, gifted, genius
0012 Able, intelligent, capable, talented, bright
0016 Average, fair
0013 Limited
0022 Creative (intellectually), imaginative
0023 Unimaginative, pedantic, literal

0132 Independent thinking
0133 Lack of independent thinking

Self-Confidence

0871 Self-deprecating, lacks confidence
0872 Realistic about shortcomings
0876 Confident
0873 Grandiose, over-confident, superiority (self-evaluation), snob
3222 Wants encouragement, reassurance, sympathy
4012 Better than appearance indicates, more interesting, more ability than cares to show, hides light under bushel
4016 "a bundle of contradictions"
4013 Worse than appearance indicates

APPENDIX B

Presenting Complaint

The 24 different chief complaints presented by students who were seen for help were condensed into five major groups:

a. depression
b. self-confidence
c. anxiety
d. sexual concerns
e. study concerns

a. Depression: These students expressed a depressive theme in several derivatives ranging from suicide attempts to hypochondriasis. The complaint usually reflected a reactive depression which might become chronic or repetitive with new episodes or academic failure or discipline.

b. Low self esteem: These students expressed problems with self-confidence through concern about grades or ability, apathy, or wishes to leave school. The problems these students had were usually chronic and egosyntonic. They were likely to be character disorders, and were seen briefly as they were dropping out.

c. Anxiety: Students who complained of anxiety or concerns about impulse control were either neurotic and seen briefly or schizophrenic and hospitalized. These students do not have a history of acting out their conflicts by failing academically or being disciplined. In contrast, the students complaining of depression, either acute or chronic, have expressed their problems in other areas, especially academically. Anxiety appears to be associated with the emergence of previously internalized problems.

d. Sexual complaints: These students presented with sexual concerns ranging from masturbatory guilt to specific homosexual concerns. They were usually diagnosed as sexually deviant and referred for long term therapy. There did not appear to be other areas of difficulty in their ego functioning.

e. Study problems: These students were seen initially for academic or administrative complaints and were then referred for therapy because their problems were considered to be psychological and not academic.

Disposition and Outcome

This variable refers to the disposition of the psychiatric case and is coded into 5 categories: long term treatment, administrative referral, hospitalization, short term treatment at Harvard, and no treatment.

Frequency Distribution of Supplemental Psychiatric Variables

Chief complaint:

depression	self-confidence	anxiety	sexual	study
11	28	26	7	19

Disposition:

private long-term treatment	administrative referral	no treatment	hospitalization	short-term treatment at Harvard
6.4%	11.7%	70.4%	4.6%	6.9%

Year student first seen for help:

freshman	sophomore	junior	senior
40	25	16	10

Number of years seen for help:

none	one	two	three or more
65%	21.9%	6.5%	6.5%